

"APPROVED"

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and educational work, doctor of
medicine,
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"29" of August 2025

WORKING PROGRAM OF THE EDUCATIONAL DISCIPLINE

**"PEDIATRICS WITH CHILDREN'S INFECTIOUS DISEASES
INCLUDING PRODUCTION PRACTICE
(PROFESSIONAL EDUCATION)"**

Educational level: 2 (master's)

Field of knowledge: 22 "Health care"

Specialty: 222 "Medicine"

Educational program: "Medicine"

2025 - 2026 academic year

Working program of the discipline "PEDIATRICS WITH CHILDREN'S INFECTIOUS DISEASES, INCLUDING MEDICAL PRACTICE (PROFESSIONAL TRAINING)" according to the educational level II (Mastery), specialty 222 ("Medicine") for students of 5th course studying on medical faculties No. 1, No. 2, No. 4, FTAFU, FTFS

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The working program was approved at the meeting of the Department of Pediatrics No. 1 (cyclic methodical meeting)

Protocol from 29th of August, 2025 No. 1

Head of the Department of Pediatrics No. 1,

PhD, professor



V.S. Berezenko

Reapproved:

On 20__/20__ n.r. _____ " __ " _____ 20__yr. Protocol No_

Signature (full name)

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1. Description of the educational discipline

"PEDIATRICS WITH CHILDREN'S INFECTIOUS DISEASES

2. INCLUDING MEDICAL PRACTICE (PROFESSIONAL TRAINING)"

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the academic discipline
		full-time education
The number of credits is 5	Branch of knowledge 22. Health care (code and name)	Normative
	Training direction 222. Medicine (code and name)	
Modules - 2	Specialty: 222 "Medicine"	A year of training 5th
Content modules - 4		
Individual research task: educational medical history		Semester IX - X
The total number of hours is 150		
Weekly hours for full-time education: classrooms - 27.5 student's independent work - 13	Educational level: Second (master's)	Lectures 10 hours
		Practical 80 hours
		Laboratory 0 hours
		Individual work 50 hours
		Individual tasks: 10 hours
		Type of control: PC

2.Purpose, expected learning outcomes and criteria for evaluating learning outcomes.

Goal:the student's acquisition of knowledge and mastery of professional competences in neonatology, pediatric endocrinology, pediatric hematology, and pediatric infectious diseases.

Learning outcomes

The student must KNOW:

- The subject area - prevention, diagnosis and treatment of diseases of newborns, endocrine and hematological diseases in children, in accordance with the requirements of the standard of higher education in the specialty 222 Medicine of the field of knowledge 22 Health care for the second (master's) level of higher education: anemia, hemolytic disease of newborns, hemophilia, leukemia, lymphomas, neonatal sepsis, idiopathic thrombocytopenic purpura, neonatal conjunctivitis, retinopathy, birth asphyxia, bronchopulmonary dysplasia, respiratory distress syndrome and pneumonia of newborns, hepatitis, stenosis of the pylorus of the stomach, gastrointestinal bleeding, purulent inflammatory diseases in newborns, specific surgical infection, congenital malformations of the musculoskeletal system, osteomyelitis, systemic vasculitis (polyarteritis nodosa, hemorrhagic vasculitis), pituitary gigantism, hypothyroidism, hypotrophy, protein-energy deficiency, hypopituitarism, thyrotoxicosis, endemic goiter, diabetes insipidus, nodular goiter, tumors of the thyroid gland, obesity, congenital dysfunction of the adrenal cortex, genetic syndromes with endocrine complications: Turner syndrome, Russell-Silver syndrome, Prader-Willi syndrome, Laron syndrome, etc.), thyroiditis, Cushing's disease and syndrome, chronic adrenal insufficiency, diabetes, adrenal tumors, organic (including congenital) hyperinsulinism, pituitary tumors, premature sexual development, hypogonadism, cryptorchidism, sex differentiation disorder, Klinefelter syndrome, dwarfism in a baby born SGA, congenital infections of the newborn, and understand occupational activities. (GC4)

The student should BE ABLE to:

- Identify the leading clinical symptoms and syndromes; according to standard methods, using the previous data of the patient's history, the data of the patient's examination, knowledge about the person, his organs and systems. Establish a preliminary clinical diagnosis of the most common diseases of newborns, endocrine and hematological diseases in children. (PLO 4)

- Collect complaints, life and disease history, evaluate 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, evaluate information about the diagnosis (blood proteins and their fractions, C-reactive protein, blood glucose, glycosylated hemoglobin, oral glucose tolerance test, blood lipids and lipoproteins and their fractions, blood hormones, ferritin, serum iron and copper, creatinine, blood and urine urea, blood electrolytes, blood aminotransferases, total blood bilirubin and its fractions, coagulogram, histomorphological examination of a lymph nodes biopsy, CBC, urine tests, sugar and acetone in urine, general analysis of cerebrospinal fluid, general analysis of sternal punctate, serological reactions in infectious diseases, amplification methods in infectious diseases (PCR, LLR), microbiological examination of biological fluids and secretions, methods of instrumental visualization of the thyroid gland, methods of instrumental visualization of abdominal organs, methods of instrumental visualization of thoracic cavity organs, methods of instrumental visualization of the genitourinary system, methods of instrumental visualization of the skull, spine, spinal cord, bones and joints, taking into account the age of the patient. Methods of instrumental visualization of the genitourinary system, methods of instrumental visualization of the skull, spine, spinal cord, bones and joints, taking into account the age of the patient. methods of instrumental visualization of the genitourinary system, methods of instrumental visualization of the skull, spine, spinal cord, bones and joints, taking into account the age of the patient. (PLO 5)

- To establish the final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis, observing the relevant ethical and legal norms, under the control of the head physician in the conditions of the health care institution. (PLO 6)

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

- Determine the necessary diet 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 10)

- 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 12)

- Assess and monitor the child's development, provide recommendations on feeding and specifics of nutrition depending on age, organize preventive vaccinations according to the calendar.(PLO 13)

- Determine the tactics and provide emergency medical care in emergency situations (neonatal asphyxia, hypoglycemia (coma), acute respiratory failure, acute adrenal insufficiency (heart-losing form of ACS), diabetic coma, including ketoacidotic, acute bleeding, convulsive syndrome, shocks (septic) under conditions of limited time according to existing clinical protocols and standards of treatment.(PLO 14)

- Perform medical manipulations such as indirect heart massage, artificial respiration, install nasogastric and orogastric tubes, measure blood pressure, restore airway patency, perform skin-to-skin contact and early breast-feeding techniques, determine blood groups, Rh-affinity, transfuse blood components and blood substitutes, take swabs for bacterioscopic, bacteriological, cytological examination, palpate the thyroid gland, conduct an examination and evaluation of the external genitalia of boys, assess the state of sexual development of children based on the previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, complying with relevant ethical and legal norms.(PLO 17)

- clearly and unambiguously convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists.(PLO 25)

Note:

PLO - program learning outcomes

GC - general competencies

Criteria for evaluating learning outcomes

Module 1 "Neonatology, diseases of the blood system and endocrine system in children"

Current control is carried out at each practical lesson in accordance with specific goals from each topic, involves 100% survey of students of the group, and evaluation of all component elements of the lesson - test control, oral survey, control of practical skills, solution of situational tasks. Written performance of tasks in the process of preparation for practical classes is also taken into account.

For each stage of the lesson, the student receives a grade of "5-4-3-2", from which the teacher determines the average arithmetic grade, which is converted into points. If, during the determination of points for the lesson, the average arithmetical score is "2", then this corresponds to 0 number of points.

The results of monitoring the level of knowledge of each component of the lesson.

1) The student's readiness for class (initial stage) is checked on the basis of answers to 12 test tasks. In the first practical session, these questions are included in the final control.

For a correct answer to 11 - 12 tests, the student receives a traditional grade of "5"; for 10 correct answers - score "4", for 8-9 correct answers - score "3", for 0-7 correct answers - score "2".

2) The student's oral survey is evaluated as follows:

The grade "5" is assigned when the student gives exhaustively accurate and clear answers without any leading questions; teaches the material without errors and inaccuracies;

The grade "4" is assigned on the condition that the student knows the content of the lesson and understands it well, answers the questions correctly, consistently and systematically, but they are not complete, although the student answers additional questions without mistakes;

The grade "3" is given to the student on the basis of his knowledge of the main content of the lesson and at a satisfactory level of his understanding, he gives answers with the help of leading questions, but he answers the directly asked questions correctly.

A grade of "2" is given in cases where the student's knowledge does not meet the requirements of the grade of "3 points";

3) Independent work at the patient's bedside.

The grade "5" is awarded in the case when the student demonstrates fluency in practical skills (on dummies and/or at the patient's bedside), the ability to analyze and apply the results obtained during the examination of the patient to solve practical tasks, namely: taking an anamnesis, examining a child, planning examination, interpretation of laboratory and instrumental research data; correctly determines the clinical diagnosis in the typical course of the disease; carries out differential diagnosis in full; prescribes the correct treatment in full; demonstrates excellent knowledge and skills in providing emergency care.

The grade "4" is awarded on the condition that the student has good practical skills (on dummies and/or at the patient's bedside); with certain inaccuracies, analyzes and applies the results obtained during the examination of the patient to solve practical tasks; correctly determines the clinical diagnosis in the typical course of the disease; performs differential diagnosis correctly, but not completely; prescribes the correct treatment in general, but may make some minor errors, which he corrects on his own; demonstrates good knowledge and skills in providing emergency care.

The grade "3" is assigned to a student when he is able to perform basic practical tasks (on dummies and/or at the patient's bedside) only after appropriate comments and help from the teacher; with some errors, analyzes and applies the obtained results to solve practical problems; determines the clinical diagnosis in the typical course of the disease; makes some mistakes when performing differential diagnosis; prescribes generally correct but incomplete treatment and/or with minor errors; demonstrates satisfactory knowledge and skills in providing emergency care;

Grade "2" is assigned in cases where the student behaves passively during independent work; is unable to make decisions and act in typical clinical situations, has clear difficulties in learning practical skills even after appropriate comments and corrections by the teacher.

4) To assess the student's mastery of the topic, he is asked to answer the questions of the situational problem.

The grade "5" is assigned when the student correctly and fully solves a complex situational problem, gives comprehensive answers to all the questions asked.

The grade "4" is awarded under the condition that the student correctly solves a complex situational problem, but may make some minor mistakes, which he corrects on his own.

Grade "3" is assigned to a student who solves a situational problem with individual errors, feeling difficulties in simple cases; is not able to systematically explain the answer independently.

The grade "2" is assigned if the student has clear difficulties in solving situational tasks, gives incorrect answers to questions.

Assessment of students' independent work on preparation for classroom practical classes is carried out during the current control of the topic in the corresponding classroom class.

Assessment of the medical history as a mandatory individual work of the student takes place during its assessment in the process of individual work of the teacher with the student.

A grade of "5" is given if the student conducted a complete clinical examination of a sick child, described its results, correctly assessed the patient's clinical condition, clinical changes in the organs and systems of the body, the results of laboratory and instrumental methods of examination, correctly determined the clinical diagnosis according to the classification of diseases and substantiated he carried out a complete differential diagnosis, prescribed full and correct treatment, correctly determined the prognosis of the disease and means of its prevention.

Grade "4" is assigned if the student conducted a full clinical examination of a sick child, but made inaccuracies in the assessment of the clinical condition, the results of laboratory and instrumental methods of examination, correctly determined the clinical diagnosis and substantiated it, did not carry out a complete differential diagnosis, prescribed the correct treatment, however, incomplete or with minor errors.

The grade "3" is given if the student made individual errors in the assessment of the patient's clinical condition, the results of clinical, laboratory and instrumental examination, establishing and justifying the diagnosis, prescribing treatment or determining the prognosis of the disease.

The grade "2" is assigned if the student made significant mistakes in the analysis of the clinical condition, the results of clinical, laboratory and instrumental examination of the sick child, did not establish the correct diagnosis, and did not prescribe the correct treatment.

The work is considered completed if the student receives a positive grade for writing and defending the medical history.

Recalculation of the assessment on a multi-point scale: "5" - 15 points, "4" - 12 points, "3" - 9 points, "2" - 0 points.

The maximum number of points that a student can score for the current educational activity is 80 points. It is calculated by adding up the number of points corresponding to the grade "excellent" in each practical lesson (5 points each for practical lessons 1-14) with the addition of the maximum point for the mandatory individual work on curating a child and writing a medical history (15 points).

The sum of points accumulated by the student as a result of the current study is a component of the overall assessment in the discipline according to the types of final control of knowledge.

A student can attend 75% of classroom classes in the discipline (lectures, seminars, laboratory practical classes).

The current control consists of all points, which the student accumulated during all classroom classes. Missed material from practical classes is processed by the student independently without crediting points.

Final control is carried out after completing the study of all topics in the last session of the module.

All students who have attended 75% of classroom classes with the amount of points they have accumulated while studying the discipline are admitted to the final module control.

A student who attended less than 75% (missed more than 25% of classes) of classroom classes is considered to have failed the curriculum and plan for the discipline and therefore must re-learn the discipline.

The form of final control is standardized, includes control of the student's theoretical and practical training: solving test tasks, control of practical skills in the diagnosis and treatment of

childhood diseases by solving situational tasks of modeling the doctor's actions in specific clinical situations, and evaluating the results of laboratory and instrumental studies.

Distribution of final control points

1. Test control:

The theoretical part of the final examination consists of answers to 40 test tasks

Correct answer to 36-40 tests (90-100% of test tasks) - 40 points

Correct answer to 32-35 tests (80-90% of test tasks) - 30 points

Correct answer to 28-31 tests (70-80% of test tasks) - 20 points

27 or fewer correct tests (less than 70% of test items) - 0 points

2. Practical training is checked by assessing skills in the diagnosis and treatment of diseases of newborns, diseases of the blood system and endocrine system in children.

The means of monitoring diagnostic skills are:

A. Solving 3 situational problems on modeling the doctor's actions in specific clinical situations.

If the student gives accurate and clear answers and demonstrates the ability to analyze and apply the results obtained during the examination of the patient to plan the examination, interprets the data of laboratory and instrumental studies; correctly determines the clinical diagnosis in the typical course of the disease; correctly and completely determines the tactics of treatment; i.e. solves the situational problem correctly and completely, 20 points are awarded.

Provided that the student correctly, but not completely, or with some inaccuracies analyzes the results for planning the examination; correctly determines the clinical diagnosis in the typical course of the disease; in general correctly determines the tactics of treatment, but may make some insignificant mistakes, that is, solves the situational problem with some inaccuracies, 16 points are assigned.

If a student with individual errors analyzes and applies the results of clinical and laboratory studies to determine a clinical diagnosis with a typical course of the disease; in general correctly, but not completely and/or with insignificant errors determines the tactics of treatment, i.e. solves the situational problem with individual errors, 12 points are assigned.

If the problem is solved with gross errors: the student made an incorrect diagnosis, misinterpreted the results of research, or prescribed the wrong examination and treatment, 0 points are assigned.

A student receives a maximum of 60 points for solving problems.

B. Evaluation of the results of laboratory and instrumental research methods. A student's correct conclusion regarding the results of the child's examination is estimated at 20 points.

If the student made inaccuracies in the evaluation of the results of laboratory and instrumental examination methods, 16 points are assigned.

If the student made some mistakes in evaluating the results of clinical, laboratory and instrumental examination, 12 points are assigned.

In the case of a false statement regarding the assessment of research results, the student is assigned 0 points.

The maximum number of points that a student can receive during the final semester control is 120 points.

The final module control is considered passed if the student has scored at least 60 points.

The discipline is credited to students if the sum of points for the current study and the final semester control is at least 111 points.

3. Program of educational discipline

MODULE 1. Neonatology, diseases of the blood system and endocrine system in children

CONTENT OF THE MODULE 1. Neonatology

CONTENT MODULE 1. Neonatology

Topic 1. Organization of neonatal care in Ukraine. Medical care for a healthy newborn baby.

Indicators of the quality of medical care for newborns: perinatal mortality, neonatal morbidity and mortality. Regionalization of perinatal care. Medical protocol about care for a healthy newborn baby: sequence of actions for providing medical care for a healthy newborn baby in the delivery room, ten steps of the warm chain, assessment of the general condition of the baby according to the Apgar scale, scheme of the initial medical examination of the newborn, care of the umbilical cord, umbilical cord remnant, umbilical wound, prevention of hemorrhagic disease of the newborn, vaccination of newborns, screening examination of newborns.

Topic 2. Prematurely born children. Children are small for gestational age.

Assessment of morphological and neuro-functional maturity of prematurely born children (according to the Ballard scale). Pathological conditions characteristic of prematurely born children. The main stages of providing medical and preventive care. Principles of enteral and parenteral nutrition of prematurely born children. Emergency assistance in emergency situations: hypothermia, hypoglycemia, apnea. Intrauterine development delay: causes, clinical options, features of early neonatal adaptation.

Topic 3. Asphyxia of a newborn. Birth trauma.

Asphyxia at birth: definition, causes, classification, diagnostic criteria. Initial, resuscitation and post-resuscitation care for a newborn child. Indications, contraindications, complications and stages of therapeutic hypothermia

Birth trauma: factors from the mother and fetus, typical manifestations of various types of birth trauma (soft tissue damage, paresis, paralysis, bone fractures, intracranial hemorrhages). Modern methods of diagnosis of intracranial hemorrhages. Principles of treatment of various types of birth injuries.

Topic 4. Respiratory distress syndrome of newborns (RDS). Pneumonia of newborns.

Respiratory distress syndrome of newborns: definition, risk factors, pathogenesis, clinical signs, diagnostic methods, differential diagnosis. Principles of treatment: stabilization of the condition at birth, surfactant replacement therapy, methods of respiratory support. Antenatal steroid prophylaxis.

Pneumonia of newborns: definition, etiology, pathogenesis, classification, features of the course of pneumonia in premature babies. Principles of antibiotic therapy of pneumonia in newborns.

Topic 5. Hemolytic disease of newborns (HCN). Hemorrhagic syndrome in newborns.

Hemolytic disease of newborns: etiology, pathogenesis, classification, clinical and laboratory criteria of various forms of the disease, differential diagnosis. Phototherapy: mechanism of action, rules of conduct, complications. Blood replacement surgery: indications, technique, complications. Specific prevention of hemolytic disease of the newborn. Forecast. Clinical manifestations of bilirubin-induced neurological dysfunction.

Causes of hemorrhagic syndrome in newborns. Hemorrhagic disease of newborns: definition, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, emergency care, prevention.

Topic 6. Intrauterine infections of newborns (TORCH - infections).

TORCH-infections of newborns: etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

Topic 7. 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. Neonatal sepsis: definition, classification, etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

CONTENT MODULE 2. Diseases of the blood system in children

Topic 8. Anemias in children (deficiency, posthemorrhagic, hemolytic, due to hematopoiesis disorders).

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

Topic 9. Hemorrhagic diseases in children.

Classification of disorders of the hemostasis system. Causes and risk factors of hemorrhagic diseases in children (hemophilia, idiopathic thrombocytopenic purpura, hemorrhagic vasculitis). The main links of the pathogenesis of hemorrhagic diseases in children. Classification of hemorrhagic diseases in children. Typical elements of rash in various types of hemorrhagic diseases. Clinical manifestations of hemorrhagic syndrome in various hemorrhagic diseases. Differential diagnosis of hemorrhagic diseases in children. Criteria for laboratory diagnosis of hemorrhagic diseases. Principles of treatment and prevention of hemophilia, idiopathic thrombocytopenic purpura, hemorrhagic vasculitis. Emergency care for bleeding in children.

Topic 10. Leukemias and lymphomas in children.

Hemoblastosis, definition, classification, etiology and pathogenesis. Acute leukemia in children: clinical variants of the course, diagnosis, differential diagnosis. Principles of leukemia treatment, complications of cytostatic therapy. Forecast. Lymphomas in children: clinic, diagnosis, differential diagnosis, principles of treatment, prognosis.

CONTENT MODULE 3. Diseases of the endocrine system in children

Topic 11. Diabetes in children.

Types of glycemic disorders in children with diabetes. Etiology, triggering factors, pathogenetic mechanisms of development, stages of development, clinical and laboratory manifestations of type 1 diabetes in children. Features of the clinical course of diabetes depending on age. Differential diagnosis of diabetes type 1, type 2 and MODY diabetes in children. Principles of diabetes therapy. Diet therapy, the system of bread units in the diet of patients with diabetes. Insulin therapy of type 1 diabetes: groups of insulin preparations, methods of its use, daily need for insulin in children in different periods of the course of the disease. Diabetic ketoacidosis and ketoacidotic coma in children: causes, clinical and laboratory manifestations, principles of therapy. Hypoglycemia and hypoglycemic coma in children: causes, clinic, diagnosis, emergency care. Differential diagnosis of hypoglycemic and ketoacidotic coma in children and adolescents. Long-term complications of type 1 diabetes in adolescence.

Topic 12. Diseases of the thyroid gland in children.

The most common disorders and diseases of the thyroid gland in children. Methods of diagnosis of diseases of the thyroid gland. Conditions associated with an elevated TSH level. Causes of hypothyroidism in children and etiology of congenital hypothyroidism. Diagnosis of congenital hypothyroidism: symptoms and screening testing. Treatment and prognosis in congenital hypothyroidism. Acquired hypothyroidism, causes, clinic, diagnosis, treatment. Diagnostic criteria of Hashimoto's disease. Endemic goiter, diagnosis, treatment, prognosis. Main clinical manifestations and diagnosis of Graves' disease. Treatment of Graves' disease in children. Thyrotoxic crisis, causes, clinic, emergency care. Diagnosis and treatment of thyroid cancer in children.

Topic 13. Diseases of the hypothalamic-pituitary system and gonads in children.

Etiology, pathogenesis, clinical picture, diagnostic methods, differential diagnosis, treatment and prevention of pituitary dwarfism, diabetes insipidus, hypogonadism, cryptorchidism, precocious puberty, delayed puberty, Turner's syndrome, Klinefelter's syndrome, ovotesticular disorder of sex formation, congenital hyperplasia of the adrenal cortex, obesity in children.

4.The structure of the academic discipline

Names of modules and topics	Number of hours				
	That's all	Lecture s	Practical training	SRS	
				Individual	Independence
MODULE 1.Neonatology, diseases of the blood system and endocrine system in children					
Content module 1 Neonatology					
1 Organization of neonatal care in Ukraine. Medical care for a healthy newborn baby.	6.3		4.3		2
2.Prematurely born children. Children are small for gestational age.	6.3		4.3		2

Names of modules and topics	Number of hours				
	That's all	Lectures	Practical training	SRS	
				Individual	Independence
3. Asphyxia of newborns. Birth trauma of newborns	8.3	2	4.3		2
4. Respiratory distress syndrome of newborns. Pneumonia of newborns	6.3		4.3		2
5. Hemolytic disease of newborns. Hemorrhagic disease of newborns.	6.3		4.3		2
6. Intrauterine infections of newborns (TORCH-infections)	6.3		4.3		2
7. Bacterial infections of newborns	6.3		4.3		2
Content module 2 Diseases of the blood system in children					
8. Anemias in children (deficiency, posthemorrhagic, hemolytic, due to hematopoiesis disorders)	8.3	2	4.3		2
9. Hemorrhagic diseases in children	6.3		4.3		2
10. Leukemias and lymphomas in children	6.3		4.3		2
Content module 3. Diseases of the endocrine system in children					
11. Diabetes in children	8.3	2	4.3		2
12. Diseases of the thyroid gland in children	6.3		4.3		2
thirteen. Diseases of the hypothalamic-pituitary system and gonads in children	6.3		4.3		2
Individual work: Curation of the patient, writing and defense of medical history	6			6	
Final control No. 1	11.1		4.1		7
Total for module 1	105	6	60	6	33

5. Lecture topics

No. z/p	Topic name	Number of hours
MODULE 1. Neonatology, diseases of the blood system and endocrine system in children		
	Asphyxia of newborns. Birth trauma of newborns	2
	Anemias in children: deficient, posthemorrhagic, hemolytic, as a result of impaired hematopoiesis	2
	Diabetes in children	2
TOTAL FOR MODULE 1		6

6. Topics of practical classes

(seminar and laboratory classes are not included in the program)

No. z/p	Topic name	Number of hours
MODULE 1. Neonatology, diseases of the blood system and endocrine system in children		
1.	Organization of neonatal care in Ukraine. Medical care for a healthy newborn baby	4.3
2	Prematurely born children. Children are small for gestational age.	4.3
3	Asphyxia of newborns Birth trauma of newborns	4.3
4	Respiratory distress syndrome and pneumonia in newborns	4.3
5	Hemolytic and hemorrhagic diseases of newborns	4.3
6	Intrauterine infections of the newborn (TORCH – infections)	4.3
7	Bacterial infections in newborns	4.3
8	Anemias in children: deficient, posthemorrhagic, hemolytic, as a result of impaired hematopoiesis.	4.3
9	Hemorrhagic diseases in children	4.3
10	Leukemias and lymphomas in children	4.3
11	Diabetes in children	4.3
12	Diseases of the thyroid gland in children	4.3
13	Diseases of the hypothalamic-pituitary system and gonads in children	4.3
14	Final control, including Test control of theoretical training Control of practical skills Solving situational tasks	4.1
Total for module 1		60

7. Independent work

The main types of independent work of students are:

- Pre-audition preparation for practical classes
- Performance of individual work
- Mastering the topics assigned to independent work
- Preparation for the final modular control

No. z/p	Title of the topic (or content of the work)	Number of hours
MODULE 1. Neonatology, diseases of the blood system and endocrine system in children		
	Preparation for practical classes	27
	Performing individual work: curation of patients, writing and defense of medical history	6
	Preparation for final control No. 1	6

N o. z/p	Title of the topic (or content of the work)	Number of hours
	<i>Total for module 1</i>	<i>39</i>

5. 8. Individual tasks

Module 1: Neonatology, diseases of the blood system and endocrine system in children

With the aim of deepening, generalizing and consolidating the knowledge that students acquire in the process of learning, as well as the application of this knowledge in practice, as a mandatory individual task with defined evaluation criteria, the curation of patients is carried out with the writing and defense of an educational case history according to the profile of the topic under consideration.

6. 9. Teaching methods

When studying the discipline "Pediatrics, children's infectious diseases", various teaching methods recommended for higher education are used, namely:

- by sources of knowledge: verbal (explanation, lecture, conversation, discussion); visual (demonstration); practical (practical work, acquisition of practical skills);
- according to the logic of the educational process: analytical (determining the general condition of the patient and the main signs of the disease), synthetic (clarifying the relationship between the main signs of diseases, determining the optimal measures for diagnosis, treatment and prevention), their combination - analytical-synthetic, as well as inductive method, deductive, their combination - transductive method;
- according to the level of independent mental activity: problematic, partially exploratory, research.

By combining and summarizing the above teaching methods, when studying the discipline, it is advisable to implement such methods of organizing educational classes as:

- method of clinical cases,
- problem-oriented method,
- the method of individual educational and research and practical tasks,
- method of competitive groups,
- method of training technologies,
- the "business game" method,
- brainstorming method
- the method of holding conferences using interactive, interdisciplinary and information and computer technologies.

Types of educational activities of the student, according to the Curriculum, are lectures, practical classes, independent work of students.

Thematic plans of lectures, practical classes and SRS ensure the implementation of all topics included in the modules in the educational process.

Lectures. Preference is given to problematic, overview and conceptual-analytical lectures. During the lecture, students develop knowledge, provide a motivational component and a generally oriented stage of acquiring scientific knowledge. Lectures play a role in quality management of students' independent work.

Practical training are conducted in the mode of rotation of modules of clinical disciplines. According to the method of organization, they are clinical, aimed at controlling the assimilation of theoretical material and the formation of practical skills and abilities, as well as the ability to analyze and apply the acquired knowledge to solve practical tasks. They provide for:

- collection of anamnesis;
- examination of a sick child;
- planning examination of a sick child;
- interpretation of laboratory and instrumental research data;
- differential diagnosis of the most common childhood diseases with their typical course;
- determination of the previous clinical diagnosis;
- determination of therapeutic tactics;
- prescription of medical nutrition;
- provision of emergency medical care;
- solving situational problems;
- practicing practical skills on dummies and at the bedside of a sick child;
- maintaining medical records.

The duration of one practical lesson, taking into account the norms of the weekly classroom load and the distribution of hours for the study of pediatrics and children's infectious diseases, is 5.0 academic hours.

Independent work of student- one of the organizational forms of education, which is regulated by the working curriculum and is carried out by the student independently outside classroom classes. Possible types of independent work: preparation for practical classes and study of topics considered only in the plan of independent work of the student, filling out a workbook on the discipline, searching and studying additional literature, creating algorithms, structural and logical schemes, writing essays, annotations, reports for speaking with messages at practical classes, on duty at the clinic outside of school hours. The organization of independent work in the departments of the pediatric hospital should be provided by the teachers of the department.

10. Control methods

The methods and forms of control and evaluation of students' success in the discipline are carried out in accordance with the requirements of the program and the Instructions for evaluating the educational activity of students in the conditions of the implementation of the European credit transfer system for the organization of the educational process, approved by the Ministry of Health of Ukraine (letter of the Ministry of Health of Ukraine No. 08.01-47/10395 dated 15.04. 2014); as well as the Regulation on the procedure for assessing students' knowledge during the current and final control of the discipline at Bogomolets National Medical University (Addendum to Order No. 782 dated September 30, 2019).

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

Forms of control

Current control is carried out in each practical lesson in accordance with the specific goals of the topic. In all practical classes, objective control of theoretical training and acquisition of practical skills (standardized according to the implementation method) is used.

Final control is conducted after completing the study of the block of relevant topics in the last session of the module (final control).

Control of independent work, which is provided for in the topic along with the classroom work, is carried out during the current control of the topic in the corresponding classroom lesson. The control of the acquisition of practical skills on the relevant topic of the lesson is carried out both during the current control and during the final control.

Control methods

Theoretical knowledge:

- written and computer testing,
- individual survey, interview,
- content-structured written works.

Practical skills and abilities:

- control of implementation of standardized practical skills provided by the student's practical training plan in the discipline:
- analysis of laboratory and instrumental studies;
- performing medical manipulations in pediatrics;
- providing assistance in emergency situations in children.

11. Distribution of points received by students

The current evaluation of students on the relevant topics is carried out at each practical session according to the specific goals of each topic according to the traditional 4-point system (excellent, good, satisfactory, unsatisfactory) with subsequent conversion into a multi-point scale. The weight of each topic in points within one module is the same and is determined by the number of topics in the module.

Distribution of points, which are assigned to students during the evaluation of current educational activities

o. z/p	Topic name	The number of points corresponding to the traditional assessment			
		5"	4"	3"	2"
Module 1:Neonatology, diseases of the blood system and endocrine system in children					
	Organization of neonatal care in Ukraine. Medical care for a healthy newborn baby.	5	4	3	0
	Premature babies. Children fromdelay of intrauterine development.	5	4	3	0
	Asphyxia of newborns. Birth trauma of newborns.	5	4	3	0
	Respiratory distress syndrome of newborns. Pneumonia of newborns.	5	4	3	0
	Hemolytic disease of newborns. Hemorrhagic disease of newborns.	5	4	3	0
	Intrauterine infections of the newborn (TORCH - infections).	5	4	3	0
	Bacterial infections of newborns.	5	4	3	0

o. z/p	Topic name	The number of points corresponding to the traditional assessment			
		5"	4"	3"	2"
	Anemias in children (deficiency, posthemorrhagic, hemolytic, due to impaired hematopoiesis).	5	4	3	0
	Leukemias and lymphomas in children.	5	4	3	0
	Hemorrhagic diseases in children.	5	4	3	0
	Diabetes in children.	5	4	3	0
	Diseases of the thyroid gland in children.	5	4	3	0
	Diseases of the hypothalamic-pituitary system and gonads in children.	5	4	3	0
	Individual work (medical history).	15	12	9	0
	Total points for the current educational activity*	The maximum score is 80			
	Final control of module No. 1	The maximum score is 120			
	Total points for module #1	The maximum score is 200 The minimum score is 111			

Conversion of the number of points from the discipline into grades according to the ECTS and four-point (traditional) scales.

Points from the discipline are independently converted both to the ECTS scale and to the four-point scale at the department.

Ranking according to the ECTS scale with the assignment of grades "A", "B", "C", "D", "E" is carried out as follows:

Estimation of ECTS	Discipline score
A	170-200
B	155-169
C	140-154
D	125-139
E	111-124
FX	60-110
F	1-59

Upon receiving an FX grade, the student has the right to 2 retakes until the next academic year according to the approved schedule. The first revision was made by the cathedral commission, the second time by a commission with the participation of the dean. With an F grade, re-study of the discipline before the new academic year in a group for a separate fee outside of school hours.

Also, points from the discipline are converted at the department into a traditional four-point scale according to absolute criteria as follows:

Discipline points	Evaluation on a four-point scale
From 170 to 200 points	5
From 140 to 169 points	4
From 139 to 111 points	3
110 points and below	2

12. Methodological support

All types of educational activities have methodological support: lectures, practical classes, independent work of students.

Methodological support of the lecture course:

1. Abstracts of lectures.
2. Methodical development of lectures.
3. Lecture presentations.
4. Video films and educational films on the subject of lectures.

Methodical provision of practical classes:

1. Methodical development of practical classes for teachers.
2. Methodical instructions for practical classes for students.
3. Variants of test questions and tasks to check the initial level of knowledge on each topic.
4. Variants of situational tasks to check mastery of topics.
5. Variants of tasks (theoretical and practical) for the final modular control.
6. Instructions for working with phantoms and dummies to practice practical skills.

Methodological support of students' independent work:

1. Methodical guidelines for pre-audit preparation for practical classes.
2. Workbook for classroom preparation.
3. Methodical instructions for performing practical skills.
4. Variants of tasks for independent work of students.

Means of diagnostics of learning success

The following tools are used to diagnose learning success:

1. Test tasks of format A
2. Practical tasks to check mastery of practical skills
3. Situational tasks.

The development of test-control questions, structured situational tasks and practical tasks used to diagnose learning success should be based on the list of questions and practical skills that the student should master when studying, respectively, modules No. 1 and 2 of the discipline "Pediatrics, Children's Infectious Diseases". The sets of practical tasks are formed from a list of practical skills that the student must master during the study of the discipline, which are practical works standardized according to the method of execution.

13. Recommended Books

Basic:

1. Fundamentals of pediatrics according to Nelson: in 2 volumes. Volume 1 / Karen J. Marcdante, Robert M. Kligman; translation of the 8th Eng. edition. Scientific editors of the translation V.S. Berezenko, T.V. Rest Kyiv: VSV "Medicine", 2019. T1-378p.
2. Fundamentals of pediatrics according to Nelson: in 2 volumes. Volume 1 / Karen J. Marcdante, Robert M. Kligman; translation of the 8th Eng. edition. Scientific editors of the translation V.S. Berezenko, T.V. Rest Kyiv: VSV "Medicine", 2019., T2- 426 p.
3. Pediatrics: textbook for students. higher education institutions of the IV level of accreditation/ edited by Prof. O.V. Heavy. - Ed. 5th amendment. and add.- Vinnytsia: Nova Kniga, 2018. -1152 p.: illustrations.
4. Neonatology: a textbook in 3 volumes / [T.K. Znamenska, Y.G. Antipkin, M.L. Aryaev, etc.]; under the editorship T.K. Znamenskaia.-Lviv: T.V. Marchenko Publisher, 2020. - Volume 1. - 408 p.
5. Neonatology: a textbook in 3 volumes / [T.K. Znamenska, Y.G. Antipkin, M.L. Aryaev, etc.]; under the editorship T.K. Znamenskaia.-Lviv: T.V. Marchenko Publisher, 2020. - Volume 2. - 456 p.
6. Neonatology: a textbook in 3 volumes / [T.K. Znamenska, Y.G. Antipkin, M.L. Aryaev, etc.]; under the editorship T.K. Znamenskaia.-Lviv: T.V. Marchenko Publisher, 2020. - Volume 3. - 380 p.
7. Neonatology: national textbook: in 2 volumes / edited by Professor E.E. Shunko - K., 2014. - Volume 1. - 960 p.
8. Neonatology: national textbook: in 2 volumes / edited by Professor E.E. Shunko - K., 2015. - Volume 2. - 640 p.
9. Nelson Textbook of Pediatrics, 21th Edition, 2019 by Robert M. Kliegman, Joseph St. Geme, 6882 p.
10. Pediatrics: textbook / T.A. Kryuchko, A.E. Abaturov, T.V. Kushnerev; by. ed. AND. Kryuchko, A.E. Abaturova — K.: VSY "Medicine", 2017. — 224 p. (pp. 143-159). ISBN 978-617-505-551-9
11. Clinical pediatrics: a textbook [V.M. Dudnyk, I.I. Andrikevich, R.I. Mantak, etc.]; under the editorship Prof. V.M. Archangel. – Vinnytsia: Nova Kniga, 2021. 648 p. ISBN978-966-382-889-3
12. Academic lectures on pediatrics/under the editorship of Yu.G. Antipkin.-Kyiv: RA-HARMONIA LLC, 2020 – 624 p.

14. Information resources:

1. Unified clinical protocol of secondary (specialized) and tertiary (highly specialized) medical care "Enteral nutrition of premature babies", approved by the Order of the Ministry of Health of Ukraine dated 05.05.2021 No. 870 <https://neonatology.org.ua/news/docs/2021/05/225-nakaz-moz-ukraini-870-enternalne-kharchuvannya-nedonoshenikh-nemovlyat>
4. Unified clinical protocol of secondary (specialized) and tertiary (highly specialized) medical care "Respiratory distress syndrome in premature babies", approved by the Order of the Ministry of Health of Ukraine dated 05.05.2021 No. 873 https://zakononline.com.ua/documents/show/497056_675313

5. Protocol of medical care for a newborn child with low birth weight, approved by the Order of the Ministry of Health of Ukraine dated August 29, 2006 No. 584 <http://ukraine.uapravo.net/data/base05/ukr05859.htm>

6. Unified clinical protocol "Initial, resuscitation and post-resuscitation care for newborns in Ukraine", approved by the Order of the Ministry of Health of Ukraine dated March 28, 2014 No. 225 <http://document.ua/pro-zatverdzhennja-ta-vprovadzhennja-mediko-tehnologichnih-d-doc190536.html>

7. Order of the Ministry of Health of Ukraine dated April 27, 2006 No. 255 "On approval of the clinical protocol for providing neonatal care to children with neonatal jaundice" <https://zakon.rada.gov.ua/rada/show/v0255282-06#Text>

8. Overview of the clinical presentation and diagnosis of acute lymphoblastic leukemia/lymphoma in children. Terzah M Horton, MD, PhD, C Philip Steuber, MD, Jon C Aster, MD, PhD/ UpToDate. Last updated: Jun 08, 2022.

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<https://emedicine.medscape.com/article/990113-clinical>

10. Pediatric Acute Lymphoblastic Leukemia, NCCN Guidelines for Patients 2021

https://www.nccn.org/patients/guidelines/content/PDF/ped_all_patient.pdf

11. Pediatric Non-Hodgkin Lymphoma. Author: J Martin Johnston, MD; Medscape. Updated: Dec 10, 2021 <https://emedicine.medscape.com/article/987540-overview>

12. Pediatric Hodgkin Lymphoma. Author: Pedro A de Alarcon, MD; Medscape. Updated: Jun 02, 2021 <https://emedicine.medscape.com/article/987101-overview>

13. Overview of Hodgkin lymphoma in children and adolescents. Authors: Kenneth L McClain, MD, PhD Kala Kamdar, MD, MS Epi. UpToDate. last updated: Mar 23, 2021.

<https://www.uptodate.com/contents/overview-of-hodgkin-lymphoma-in-children-and-adolescents>

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15. World Health Organization (WHO): Guideline on use of ferritin concentrations to assess iron status in individuals and populations (2020)

16. WHO: Guideline for fortification of rice with vitamins and minerals as a public health strategy (2018)

17. WHO: Guideline for daily iron supplementation in adult women and adolescent girls (2016)

9. WHO: Guideline for daily iron supplementation in infants and children (2016)

18. WHO: Guideline for use of multiple micronutrient powders for point-of-use fortification of foods consumed by infants and young children aged 6-23 months and children aged 2-12 years (2016)

19. WHO: Guideline for intermittent iron and folic acid supplementation in menstruating women (2011)

20. WHO: Guideline for intermittent iron supplementation in preschool and school-age children (2011)

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22. National Institute for Health and Care Excellence (2019) Thyroid disease: assessment and management. NICE guideline [NG145]
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26. Order No. 676 dated 12.10.2006 "Clinical protocol for providing medical care to patients with Schönlein-Henoch vasculitis (hemorrhagic vasculitis, Schönlein-Henoch purpura) (VSHG)".
27. Order No. 34 dated 15.01.2014 "Unified clinical protocol of emergency medical care. Hemophilia".
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<http://ujpe.com.ua/article/view/90733/86609>
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