## MINISTRY OF HEALTH OF UKRAINE KHARKIV NATIONAL MEDICAL UNIVERSITY

## Department of Pediatrics №1 and Neonatology Academic year 2021/2022

# SYLLABUS OF THE EDUCATIONAL DISCIPLINE "PEDIATRICS"

Normative educational component

The form of education is full-time, distance

**Educational program for training specialists of the second (master's)** 

level of higher education training 22 "Healthcare"

in specialty 222 "Medicine"

Course 6

The syllabus of the discipline was approved at the meeting of the Department of Pediatric #1 and Neonatology

Protocol No.1 from

"27" August 2021

Head of Department

prof. M. Gonchar

Approved by the methodical commission of KhNMU on problems of professional training pediatric profile

Protocol No.1 from

"27" August 2021

Chairperson of the methodical commission of KhNMU on problems of professional training pediatric profile

prof. M. Gonchar

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**Direct consultations:** time and location according to department schedule.

**On-line consultations**: Moodle, Zoom, Google Meet (schedule and location by prior agreement with a lecturer)

**Location:** Municipal Non-profit Enterprise of the Kharkiv Regional Council "Regional Clinical Children Hospital

#### INTRODUCTION

The syllabus of the discipline "Pediatrics" is compiled in accordance with the educational-professional program "Medicine", the second (master's) level, field of knowledge 22 "Health".

**Objective:** to provide training for highly qualified specialists in the field of medicine, namely in pediatrics, able to solve complex problems of diagnostics, treatment and prevention of childhood diseases.

#### Learning outcomes.

The course covers the main aspects of training a future pediatrician, family doctor or neonatologist.

According to the training program in the discipline of "Pediatrics", the applicant receives theoretical knowledge, methodological training, practical skills and abilities in the following areas:

- Differential diagnostics of the most common children respiratory diseases. Emergency care for major emergencies.
- Differential diagnostics of the most common diseases of the circulatory system. Emergency care for major emergencies.
- Differential diagnostics of the most common digestive diseases. Emergency care for major emergencies.
- Differential diagnostics of the most common diseases of the urinary system. Emergency care for major emergencies.

The subject of study of the discipline are conditions and diseases that can occur in children of different ages.

#### **Interdisciplinary links:**

#### Prerequisites and co-requisites of the discipline

The discipline "Pediatrics" is related to the disciplines of medical biology, normal and pathological anatomy, normal and pathological physiology, biochemistry, microbiology, propaedeutics of pediatrics, medical genetics, pharmacology and medical prescription, epidemiology and principles of evidence-based medicine, emergency care, and also have practical skills in caring for pediatric patients and their management in outpatient and inpatient settings.

#### Post-requisites of the discipline.

The main provisions of the training discipline should be applied in the study of related disciplines during the 6 year of study, is the basis for preparing for the licensed exam, preparing for study in higher education institutions at the programs of the third educational and scientific level.

#### 1. PURPOSE AND TASKS OF THE COURSE

**1.1. The purpose of the study** is to provide training for highly qualified specialists in the field of pediatrics, able to solve complex problems of diagnosis and treatment of major somatic diseases and conditions in children of different ages.

**1.2. The main objectives** of the course are the acquisition general and professional competencies of the educational and professional program "Medicine" of the second level of higher education, specialty 222 Medicine.

#### **1.3. Competences and learning outcomes**, the formation of which is facilitated by the discipline:

- 1.3.1. The study of the discipline provides students with the acquisition of competencies:
- Integrated competencies:

ability to solve typical and complex specialized tasks and practical problems in professional activities in the field of health care, or in the learning process, which involves research and/or innovation and is characterized by complex and uncertain conditions and requirements.

• General competencies:

ability for abstract thinking, analysis and synthesis, ability to learn and to be trained; the ability to apply knowledge in practical situations; knowledge and understanding of the subject area and understanding of professional activities; adaptability and action in a new situation; the ability to make informed decisions; work in a team; interpersonal interaction skills; ability to communicate effectively in certain language with using both personal skills and appropriate technology; to be certain and responsible for any activities and take into account all social aspects.

• Professional competencies in pediatrics:

Survey skills; ability to identify and evaluate a list of necessary laboratory and instrumental investigations; ability to establish a preliminary and clinical diagnosis of the disease; ability to determine the necessary regimens of work, rest and nutrition; the ability to define causes and principles of treatment of disease; ability to diagnose and provide an intensive care in emergency conditions; medical manipulation skills; the ability to plan and implement sanitary, preventive and anti-epidemic events, including infectious diseases; the ability to define tactics for the management of persons subject to dispensary supervision; ability to make medical records.

- 1.3.2. The study of the discipline provides students with the acquisition of the following program learning outcomes:
- PRT 1 to have general and special fundamental and profession-oriented knowledge, abilities, skills and competences required for carrying out typical professional tasks, which are associated with activity in the medical field in a particular position
- PRT 2 to have knowledge about psychophysiological peculiarities of human, human health, health support, prophylaxis of diseases, treatment of human, health of population

Use of knowledge and understanding:

PRT 3 – to apply the acquired knowledge, skills and understanding for performing typical tasks in the doctor's activity, whose sphere of use is determined by lists of syndromes, signs and symptoms, diseases, medical emergencies, laboratory and instrumental methods of examination, medical manipulations

PRT 4 – to collect information about the patient

PRT 5 – to evaluate results of questioning, physical examination, data of laboratory and instrumental methods of examination

PRT 6 – to establish of an initial clinical diagnosis of a disease

PRT 7 – to determine the character and principles of treatment of diseases

PRT 8 – to determine the required diet, mode of work and rest in treating diseases

PRT 9 – to determine the tactics for managing the persons subject for regular medical check-ups

PRT 10 – to diagnose medical emergencies, determine tactics for provision of emergency medical aid

PRT 15 – to perform medical manipulations

PRT 17 – be able to keep medical documents and processing state, social and medical information Formation of judgements:

PRT 18 -to assess the state of human health and provide its support with consideration of effects of the environment and other determinants of health

PRT 20 – to apply the acquired knowledge about the current system of health care for optimization of one's own professional activity and participation in performing practical tasks in the field

PRT 21 – to adhere to the ethical code of the doctor, which ensures the formation of a specialist with appropriate personal qualities

The study of this discipline promotes development of the following soft skills:

- Communicability (implemented through: workingin groups with brainstorming during the analysis of clinical cases, presenting results of independent work to the group),
- teamwork (implemented through: workingin groups with brainstorming during the analysis of clinical cases),
- conflict management (implemented through: business games),
- time management (implemented through: self-organization during working in groups and individually),
- leadership skills (implemented through: presenting the results of individual work for the group).

#### 2. INFORMATION SCOPE OF THE COURSE

#### 2.1 General information

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the discipline full-time education
Number of credits 8	Area of knowledge 22 "Health care"	Normative
		Year of preparation:
The total number of hours	Specialty: 222 "Medicine"	6th
		Semester
is 240		XI-XII
		Lectures
		0 hours
		Practical, seminar
Hours for day (or evening)		135 hours
form of study:	Education level:	Laboratory
classroom - 135	master	0 hours
independent work of the		Individual work
student - 105		105 hours
		Individual tasks:
		Type of control:
		Differentiated credit

#### 2.2 Description of the discipline

#### 2.2.1 Lectures

Not provided per the curriculum

#### 2.2.2 Seminars

Not provided per the curriculum

### 2.2.3 Practical classes

No	Topics	Number of	Learning	Forms of
n/o		hours	methods	control
	Chapter 1. Differential diagnosis of			
1.	Topic 1. Differential diagnosis of cough syndrome in children.  Modern methods of examination	6	Verbal (explanation, conversation,	oral examination (individual and frontal); written
	of a child with respiratory pathology.		discussion), Visual (presentation, videos), role play, (case simulation, delegation of duites), case method, debates, brainstorming, interactive virtual	survey; test control
			cases, use of	
2.	Topic 2. Differential diagnosis of shortness of breath. Pneumonia in children. Complications of pneumonia. Imperial and specific antibiotic therapy in the treatment of children of different ages.	6	mannequins  Verbal (explanation, conversation, discussion), Visual (presentation, videos), role play, (case simulation, delegation of duites), case method, debates, brainstorming, interactive virtual cases, use of mannequins	control
3.	Topic 3. Differential diagnosis of obstruction syndrome. Standards of diagnosis and treatment of asthma.	6	Verbal (explanation, conversation, discussion), Visual (presentation, videos), role play, (case simulation, delegation of duites), case method, debates, brainstorming, interactive virtual cases, use of mannequins	oral examination (individual and frontal); written survey; test control
4.	Topic 4. Differential diagnosis of cyanosis. Hereditary, congenital and chronic diseases of the bronchopulmonary system.	6	Verbal (explanation, conversation, discussion), Visual (presentation, videos), role play, (case simulation, delegation of	oral examination (individual and frontal); written survey; test control

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			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
	Section 2. Differential diagnosis th	ne most common	diseases of the circ	ulatory system in
	children.			
5.	Topic 5. Differential diagnosis of	6	Verbal	oral examination
] "	cardiomegaly in children. Non-	Ü	(explanation,	(individual and
	inflammatory and inflammatory		conversation,	frontal); written
	heart diseases.		discussion), Visual	* *
	neart diseases.		(presentation,	control
			-	Control
			videos), role play,	
			(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
6.	Topic 6. Differential diagnosis of	6	Verbal	oral examination
	heart murmurs. Congenital and		(explanation,	(individual and
	acquired heart defects,		conversation,	frontal); written
	cardiomyopathy. Failure		discussion), Visual	survey; test
	syndrome. Managment for		(presentation,	control
	children with congenital heart		videos), role play,	
	disease.		(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
7.	Topic 7. Differential diagnosis of	6	Verbal	oral examination
	cardiac arrhythmias in children.		(explanation,	(individual and
			conversation,	frontal); written
			discussion), Visual	, ·
			(presentation,	control
			videos), role play,	
			(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
8.	Tonia & Differential diagnosis of	6	mannequins Verbal	oral examination
٥.	Topic 8. Differential diagnosis of fever, non-infectious rash.	O		
	, , , , , , , , , , , , , , , , , , ,		(explanation,	(individual and
	Systemic connective tissue		conversation,	frontal); written
	diseases and systemic vasculitis in		discussion), Visual	

			T	
	children. Management of patients		(presentation,	survey; test
	with systemic connective tissue		videos), role play,	control
	diseases.		(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
9.	Tonia O Differential diagnosis of	6	Verbal	oral examination
9.	Topic 9. Differential diagnosis of arthritis in children. Juvenile	O		
			(explanation,	(individual and
	idiopathic arthritis, reactive		conversation,	frontal); written
	arthritis. Management and		discussion), Visual	• .
	treatment of sick children.		(presentation,	control
	Prevention of reactive arthritis in		videos), role play,	
	children.		(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
	Section 3. Differential diagnosis of	f the most commo	1	gostivo system in
	children.	the most commo	in diseases of the di	igestive system in
10			77 1 1	1
10.	Topic 10. Differential diagnosis of	6	Verbal	oral examination
	abdominal pain syndrome.		(explanation,	(individual and
	Functional and organic diseases of		conversation,	frontal); written
	the stomach and duodenum in		discussion), Visual	• .
	children. Management and		(presentation,	control
	treatment of a sick child.		videos), role play,	
			(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
1 1	Tonio 11 Differential diagnosis of	<u> </u>	mannequins	anal avamination
11.	Topic 11. Differential diagnosis of	6	Verbal	oral examination
	hepatosplenomegaly syndrome		(explanation,	(individual and
	and portal hypertension. Diseases		conversation,	frontal); written
	of the hepatobiliary system and		discussion), Visual	•
	pancreas in children		(presentation,	control
			videos), role play,	
			(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			· ·	
Ì			mannequins	

12.	Topic 12. Differential diagnosis of constipation and diarrhea. Functional and organic diseases of the intestine in children. Tactics of management and treatment of a sick child.	6	Verbal (explanation, conversation, discussion), Visual (presentation, videos), role play,	oral examination (individual and frontal); written survey; test control
			(case simulation, delegation of duites), case method, debates, brainstorming,	
			interactive virtual cases, use of	
	G ( 4 Diee 4 1 1	P 41	mannequins	•
	Section 4. Differential diagnosis of children.	f the most commo	on diseases of the u	rinary system in
13.	Topic 13. Differential diagnosis of dysuria syndrome. Infectious and inflammatory diseases of the	6	Verbal (explanation, conversation,	oral examination (individual and frontal); written
	urinary system in children.  Dysmetabolic nephropathy and		discussion), Visual (presentation,	survey; test control
	tubulopathy in children. Tactics of managing a sick child with the most common infectious and		videos), role play, (case simulation, delegation of	
	inflammatory diseases of the urinary system and their complications. Prevention of		duites), case method, debates, brainstorming,	
	urethritis, cystitis, pyelonephritis.		interactive virtual cases, use of mannequins	
14.	Topic 14. Differential diagnosis of edema and nephrotic syndrome. Primary and secondary glomerulonephritis in children.	6	Verbal (explanation, conversation, discussion), Visual	oral examination (individual and frontal); written survey; test
	Acute and chronic renal failure in children. Tactics of managing a sick child with acute and chronic		(presentation, videos), role play, (case simulation,	control
	glomerulonephritis.		delegation of duites), case	
			method, debates, brainstorming, interactive virtual	
			cases, use of mannequins	
	Section 5. Dispensary supervision	of healthy and sic		
15.	Topic 15. Differential diagnosis of jaundice in newborns. Dispensary observation of children with	6	Verbal (explanation, conversation,	oral examination (individual and frontal); written
	perinatal pathology of the central nervous system. Tactics of management and treatment of sick children.		discussion), Visual (presentation, videos), role play, (case simulation,	survey; test control
			delegation of duites), case	

			mathad dahatas	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
1.6	T : 16 D'66 : 11 1		mannequins	1
16.	Topic 16. Differential diagnosis of	6	Verbal	oral examination
	hypertension. Tactics of		(explanation,	(individual and
	management and treatment of sick		conversation,	frontal); written
	children. Features of dynamic		discussion), Visual	• '
	medical supervision of		(presentation,	control
	adolescents.		videos), role play,	
			(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
	Section 6. Differential diagnosis of	f the most commo	n diseases of the he	ematopoietic
	organs in the practice of a pediati		logist.	
17.	Topic 17. Differential diagnosis of	5	Verbal	oral examination
	leukemoid reactions and diseases		(explanation,	(individual and
	of the hematopoietic organs in		conversation,	frontal); written
	children with chronic somatic		discussion), Visual	survey; test
	pathology.		(presentation,	control
			videos), role play,	
			(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
18.	Topic 18. Differential diagnosis of	5	Verbal	oral examination
	the main hematological symptoms		(explanation,	(individual and
	and syndromes in the practice of a		conversation,	frontal); written
	neonatologist and pediatrician.		discussion), Visual	survey; test
			(presentation,	control
			videos), role play,	
			(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
	Section 7. Emergency care for maj	or emergencies. P		kraine.
19.	Topic 19. Emergency care for	5	Verbal	oral examination
	acute respiratory failure in		(explanation,	(individual and
	children. Emergency care for		conversation,	frontal); written
	asthmatic status. Emergency care		discussion), Visual	* 1
	for febrile seizures. Emergency		(presentation,	control

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	care for anaphylactic reactions.		videos), role play,	
	Respiratory support.		(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
20.	Topic 20. Emergency care for	6	Verbal	oral examination
	acute cardiovascular failure.		(explanation,	(individual and
	Emergency care for paroxysmal		conversation,	frontal); written
	arrhythmias. Tactics of		discussion), Visual	* *
	management and treatment of a		(presentation,	control
	patient with GOS on the basis of		videos), role play,	Control
	evidence-based medicine.		(case simulation,	
			,	
	Providing emergency care in		delegation of	
	autonomic crises, hypertensive		duites), case	
	crisis.		method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
21	Tonio 21 Emanganay ages for		_	oral examination
21.	Topic 21. Emergency care for	6	Verbal	
	threatening conditions that are		(explanation,	(individual and
	accompanied by abdominal pain		conversation,	frontal); written
	in children. Emergency care for		discussion), Visual	survey; test
	acute liver failure. Principles of		(presentation,	control
	treatment of acute kidney damage,		videos), role play,	
	acute and chronic renal failure in		(case simulation,	
	children. Hemo and peritoneal		delegation of	
	dialysis. Shows.		duites), case	
	Contraindications. Risks.		7 '	
	Contraindications, Risks.		method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
			mannequins	
22.	Topic 22. Treatment of sepsis,	6	Verbal	oral examination
	sepsis shock.		(explanation,	(individual and
	Study of theoretical issues.		conversation,	frontal); written
	Acquaintance with modern		discussion), Visual	* *
	-		7 '	• .
	international protocols.		(presentation,	control
			videos), role play,	
			(case simulation,	
			delegation of	
			duites), case	
			method, debates,	
			brainstorming,	
			interactive virtual	
			cases, use of	
2.2			mannequins	
23.	Final lesson	6	Clinical	Computer
			examination,	testing,
			Computer	Control of
			testing	individual work,
<u> </u>				

		Assessment of
		current learning
		activity
Hours in general	135	

## 2.2.4. Laboratory classes

Not provided by the curriculum

### 2.2.5. Individual work

No	Topics	Number of	Learning	Forms of
n/o		hours	methods	control
1.	Topic 24. Preparation for a practical lesson on the differential diagnosis of cough syndrome in children and the differential diagnosis of shortness of breath. Pneumonia in children. Complications of pneumonia. Study of theoretical issues. Acquaintance with modern international protocols.	4	Practical (self- education)	oral examination (individual and frontal); written survey; test control
2.	Topic 25. Preparation for a practical lesson on the differential diagnosis of bronchial obstruction syndrome and the differential diagnosis of cyanosis. Hereditary, congenital and chronic diseases of the bronchopulmonary system. Study of theoretical issues. Acquaintance with modern international protocols.	4	Practical (self- education)	oral examination (individual and frontal); written survey; test control
3.	Topic 26. Preparation for a practical lesson on the differential diagnosis of cardiomegaly in children. Non-inflammatory heart disease. Differential diagnosis of heart murmurs. Congenital and acquired heart defects, cardiomyopathy. Circulatory failure syndrome. Tactics for children with congenital heart disease. Differential diagnosis of heart rhythm and conduction disorders in children. Study of theoretical issues. Acquaintance with modern international protocols.	4	Practical (self-education)	oral examination (individual and frontal); written survey; test control
4.	Topic 27. Preparation for a practical lesson on the differential diagnosis of fever of unclear origin, non-infectious rash.	5	Practical (self- education)	oral examination (individual and frontal); written

	Systemic connective tissue			survey; test
	diseases and systemic vasculitis in			control
	children. Tactics of management			
	of patients with systemic			
	•			
	Differential diagnosis of joint			
	syndrome in children. Juvenile			
	rheumatoid arthritis, reactive			
	arthritis. Tactics of management			
	and treatment of sick children.			
	Prevention of reactive arthritis in			
	children. Study of theoretical			
	issues. Acquaintance with modern			
	international protocols.			
		5	Dragtical (galf	anal avamination
5.	Topic 28. Preparation for a	3	Practical (self-	oral examination
	practical lesson on the differential		education)	(individual and
	diagnosis of abdominal pain			frontal); written
	syndrome. Functional and organic			survey; test
	diseases of the stomach and			control
				Control
1	duodenum in children. Tactics of			
	management and treatment of a			
	sick child. Differential diagnosis			
	of hepatosplenomegaly syndrome			
	and portal hypertension. Diseases			
	- · · ·			
	of the hepatobiliary system and			
	pancreas in children. Differential			
	diagnosis of constipation			
	syndrome and diarrhea. Functional			
	and organic diseases of the			
	intestine in children. Tactics of			
	management and treatment of a			
	sick child. Study of theoretical			
	issues. Acquaintance with modern			
	international protocols.			
6		5	Drastical (calf	oral examination
6.	Topic 29. Preparation for a	3	Practical (self-	
	practical lesson on the differential		education)	(individual and
	diagnosis of dysuria. Infectious			frontal); written
	and inflammatory diseases of the			survey; test
	urinary system in children.			control
				Control
	Dysmetabolic nephropathy and			
	tubulopathy in children. Tactics of			
	managing a sick child with the			
	most common infectious and			
	inflammatory diseases of the			
	urinary system and their			
	•			
	complications. Prevention of			
	urethritis, cystitis, pyelonephritis.			
	Differential diagnosis of edema			
	and nephrotic syndrome. Primary			
	and secondary glomerulonephritis			
	• •			
	in children. Acute and chronic			
	renal failure in children. Tactics of			
	managing a sick child with acute			
	and chronic glomerulonephritis.			
	Study of theoretical issues.			
	study of incordical issues.			

	Acquaintance with modern			
	1			
	international protocols.		D : 1 / 10	1
7.	Topic 30. Preparation for a	5	Practical (self-	oral examination
	practical lesson on the differential		education)	(individual and
	diagnosis of jaundice in newborns.			frontal); written
	Dispensary observation of children			survey; test
	with perinatal pathology of the			control
	central nervous system. Tactics of			
	management and treatment of sick			
	children. Study of theoretical			
	issues. Acquaintance with modern			
	international protocols.			
8.	Topic 31. Preparation for a	5	Practical (self-	oral examination
0.	practical lesson on the differential	3	education)	(individual and
	*		cuucation)	frontal); written
	diagnosis of hypertension. Tactics			7 '
	of management and treatment of			survey; test
	sick children. Features of dynamic			control
	medical supervision of			
	adolescents. Study of theoretical			
	issues. Acquaintance with modern			
	international protocols.			
9.	Topic 32. Preparation for a	5	Practical (self-	oral examination
	practical lesson on the differential		education)	(individual and
	diagnosis of leukemic reactions		·	frontal); written
	and hematological changes in			survey; test
	children with chronic somatic			control
	pathology. Differential diagnosis			
	of the main hematological			
	symptoms and syndromes in			
	children with various somatic			
	pathologies. Study of theoretical			
	issues. Acquaintance with modern			
1.0	international protocols.	4	D (1 1 / 10	1
10	Topic 33. Preparation for practical	4	Practical (self-	oral examination
	training in emergency care for		education)	(individual and
	acute respiratory failure in			frontal); written
	children. Emergency care for			survey; test
	asthmatic status. Respiratory			control
	support. Emergency care for acute			
	heart failure. Emergency care for			
	paroxysmal arrhythmias and			
	Morgan-Adams-Stokes syndrome.			
	Tactics of management and			
	treatment of a sick child. Study of			
	theoretical issues. Acquaintance			
	with modern international			
1 1	protocols.	Λ	Drastical (aslf	oral avamination
11	Topic 34. Preparation for practical	4	Practical (self-	oral examination
	training in emergency care in acute		education)	(individual and
	liver failure. Immediate			frontal); written
	help with threatening conditions			survey; test
	that are accompanied by			control
	abdominal pain in children.			
	Principles of treatment of acute			
	and chronic renal failure in			

12	children. Hemo and peritoneal dialysis. Shows. Contraindications. Risks. Treatment of sepsis, sepsis shock. Study of theoretical issues. Acquaintance with modern international protocols Topic 35. Preparation for practical training on the main indications and contraindications to organ and tissue transplantation in children with somatic pathology. Risks. Expected results. Study of	4	Practical (self-education)	oral examination (individual and frontal); written survey; test control
	theoretical issues. Acquaintance with modern international protocols.			
	Topic 36. Organization of emergency care for children in an outpatient setting.	5	Practical (self- education)	oral examination (individual and frontal); written survey; test control
14	Topic 37. Rational feeding and nutrition of a child under three years of age. Principles of effective control over the quality of feeding.	5	Practical (self- education)	oral examination (individual and frontal); written survey; test control
15	Topic 38. Ways of prenatal HIV transmission. Prevention. Management of children born to HIV-infected women.	4	Practical (self-education)	oral examination (individual and frontal); written survey; test control
16	Topic 39. Laboratory diagnosis of HIV infections. Features of diagnosis of HIV infection in children born to HIV-infected mothers.	4	Practical (self- education)	oral examination (individual and frontal); written survey; test control
17	Topic 40. Differential diagnosis of anemia in children with somatic pathology.	5	Practical (self- education)	oral examination (individual and frontal); written survey; test control
18	Topic 41. Differential diagnosis of obesity in children. Tactics of managing a sick child. Prevention.	5	Practical (self-education)	oral examination (individual and frontal); written survey; test control
	Topic 42. Differential diagnosis of hyperglycemia and hypoglycemia syndromes in children. Diagnosis, management tactics. Principles of emergency care in critical situations.	5	Practical (self- education)	oral examination (individual and frontal); written survey; test control
20	Topic 43. Differential diagnosis of diseases of the hypothalamic-	5	Practical (self- education)	oral examination (individual and

pituitary system and adrenal glands in children.			frontal); written survey; test control
21 Topic 44. Scales of pain. The purpose of the assessment. Barriers to pain assessment and measurement. Non-pharmacological and pharmacological methods of anesthesia. Neuropathic pain. Assessment in children. Pharmacological treatment. Evaluation of pain in young children. Pharmacological and non-pharmacological methods of pain treatment in newborns and young children.	4	Practical (self-education)	oral examination (individual and frontal); written survey; test control
Topic 45. Communication with siblings. Spiritual and social support of the child and his family members. Communication with children and solving emotional problems. The level of interaction between the child and family members. Recommendations. Evaluation of treatment options and assistance to the child and family.	4	Practical (self-education)	oral examination (individual and frontal); written survey; test control
23 Topic 46. Psychological needs of children depending on age. Spiritual needs of children depending on age. Elaboration of Orders of the Ministry of Health of Ukraine on palliative care. Protocols for palliative care.	5	Practical (self- education)	oral examination (individual and frontal); written survey; test control
Total hours of independent student work	105		

#### 3. EVALUATION CRITERIA

#### 3.1 Policy of learning activities assessment

3.1. Evaluation of the success of education of students is carried out on the basis of the order of KhNMU from 21.08.2021 № 181 "Instructions for evaluating the educational activities of students of higher education at the Kharkiv National Medical University".

#### Link:

http://www.knmu.kharkov.ua/index.php?option=com\_content&view=article&id=1226%3A2013-03-25-12-07-55&catid=4%3A2011-05-04-07-20-12&Itemid=19&lang=uk

Assessment of current learning activities (CLA). Teachers make sure that every student received the necessary competence in the province included in the topics of practical classes. Assimilation of the topic (current control) is controlled in a practical lesson according to the specific goals. The following tools are used to assess the level of preparation of students: tests, solving situational problems, interpretation and evaluation of laboratory tests, methods of prescribing therapy, monitoring the acquisition of practical skills.

When assessing the mastery of each topic of the discipline the student is graded according to the traditional 4-point system: "excellent", "good", "satisfactory" or "unsatisfactory".

Assessment of the discipline. The final lesson (FL) is conducted in accordance with the program of academic discipline during the semester on schedule, during classes. Assessment of the the the discipline is given to the student at the last (final) lesson. The final score for the current learning activity (CLA) and the final lesson (FL) is defined as the arithmetic mean of the traditional grades for each class and FL, rounded to 2 decimal places and listed in a multi-point scale according to the standard table 1 and «Instructions of assessment of current student's learning activities» or recalculation average grades of CLA into score according to the ECTC, which teacher can get automatically using electronic journal of Automated Control System (ACS).

Student should get minimum - 120 points, maximum - 200 points during the current learning activities.

#### Assessment of students' independent work

Assimilation of topics that are submitted only for independent work is checked during the current learning activities of topic on conformable classes.

Differential credit - is conducted by the teacher of the academic group in the last lesson of the discipline. Admission to the test is determined in the points of current educational activity, namely: minimum 70 points, maximum - 120 points. Directly differential is credited: minimum - 50 points, maximum - 80 points.

Assessment in the discipline is the sum of points for the current educational activity and differentiated credit in points: minimum - 120 points, maximum - 200 points corresponds to the national scale and ECTS scale.

When assessing the mastery of each topic (**CLA**) and the final lesson (**FL**) of the discipline the student is graded according to the traditional 4-point system: "excellent", "good", "satisfactory" or "unsatisfactory".

The final score for the current learning activity (CLA) and the final lesson (FL) is defined as the arithmetic mean of the traditional grades for each class and FL, rounded to 2 decimal places and listed in a multi-point scale according to the standard table 1.

Recalculation of the average grade of CLA and FL for disciplines that end differentiated credit, is carried outaccording to the table 1. The minimum number of points that a student shouldget for admission to differentiated credit or exam - 70 points, the minimum positive grade on the differentialcredit - 50 points, maximum - 80 points. The maximum score for differentialcredit is 200 points, the minimum is 120 points.

## Recalculation of the average grade for the current activity into a multi-point scale (for disciplines which are completed by the differential credit or exam)

4-point	200- point	
scale	scale	
5	120	
4.95-4,99	119	
4.91-4,94	118	
4.87-4,9	117	
4.83-4,86	116	
4.79-4,82	115	
4.75-4,78	114	
4.7-4,74	113	
4.66-4,69	112	
4.62-4,65	111	
4.58-4,61	110	
4.54-4,57	109	
4.5-4,53	108	
4.45-4,49	107	
4.41-4,44	106	
4.37-4,4	105	
4.33-4,36	104	
4.29-4,32	103	
4.25- 4,28	102	
4.2- 4,24	101	
4.16- 4,19	100	
4.12- 4,15	99	
4.08- 4,11	98	
4.04- 4,07	97	
3.99-4,03	96	
3.95- 3,98	95	

	200	
4- point	200- point	
scale	scale	
3.91-3,94	94	
3.87-3,9	93	
3.83- 3,86	92	
3.79- 3,82	91	
3.74-3,78	90	
3.7- 3,73	89	
3.66- 3,69	88	
3.62- 3,65	87	
3.58-3,61	86	
3.54- 3,57	85	
3.49- 3,53	84	
3.45-3,48	83	
3.41-3,44	82	
3.37-3,4	81	
3.33- 3,36	80	
3.29-3,32	79	
3.25-3,28	78	
3.21-3,24	77	
3.18-3,2	76	
3.15-3,17	75	
3.13- 3,14	74	
3.1-3,12	73	
3.07- 3,09	72	
3.04-3,06	71	
3.0-3,03	70	
Less than 3	Insufficient	

Students who have completed all the types of work provided for by the curriculum are allowed to differentiated credit, and during the study of sections they scored at least the minimum number of points.

The form of differential credit is standardized and includes control of theoretical (test control) and practical training (demonstration of the student's skills near the bed of a sick child, solving structured situational problems, performing manipulations).

The test includes 50 tasks.

Students perform practical skills near the patient's bed (assessment of the general condition of the sick child, analysis of anamnesis, objective examination and determination of clinical changes of organs and systems, substantiation of a preliminary diagnosis, prescription of treatment, determination of emergency events, etc.).

Solving a complex structured situational problem involving interpretation of laboratory and instrumental research data, substantiation of clinical diagnosis, definition of therapeutic tactics, prescribing treatment or providing emergency care.

An exam or differentiated credit of the discipline or itspart is the process during which the received for the course (semester) are checked:

- level of theoretical knowledge;
- development of creative thinking;
- self-employment skills;

- competencies - the ability to synthesize the acquired knowledge and apply it in solving practical problems.

Differentiated credit is carried out by the instructor of the group at the final practical lesson, and for the exams period a schedule is established, approved by the rector of the KHNMU with specific dates of taking exams.

If the exam is not passed, the retaking dates will be established during the holidays until the beginning of the next semester.

A discipline grade is current learning activity (consists of the total number of points during the learning semester, which can be evaluated from 70 to 120 points) + differential credit (consists of evaluation of practical skills, laboratory and instrumental methods of research and solving situational problems) = 120 points + 80 points = 200 points.

Correspondence of grades on a 200-point scale, four-point "national" and ECTS scale

Table 2

correspondence of grades on a 200-point scale, rour-point mational and EC15 scale				
Grade on multi-point (200) scale	Grade on ECTS scale	Grade on four-point "national" scale		
from 180 to 200 points	A	excellent		
from 160 to 179 points	В	good		
from 150 to 159 points	С	good		
from 130 to 149 points	D	satisfactory		
from 120 to 129 points	E	satisfactory		
less 120 points	F, Fx	unsatisfactory		

The final exam is held as an integrated practically oriented exam combines two subjects in one day: I - "Children's diseases with children's infectious diseases."

The schedule of the complex practically oriented final exam was set up in such a way that, taking into account the peculiarities of the children's clinic, on the first day graduates take the I stage of the II complex of the practically oriented exam on "Children's diseases with children's infectious diseases" in a specially equipped phantom hall of the KHNMU, where abilities and practical skills are tested according to the educational and qualification characteristics of the graduate and mastery of emergency issues for children.

The next day, students take the second part ("by the bed of the patient") on "Children's diseases with children's infectious diseases," which provides for the solution number of situational clinical tasks about patients of children's age, diagnosis, differential diagnosis, making up an examination plan, prescribing treatment, as well as filling out the medical documentation and solving the typical situation

Each set folder for the first part of the exam has the following tasks:

- solving 5 situational problems (task 1 for diagnosing an emergency condition, task 2 for determining tactics and providing emergency medical care, task 3 evaluating the results of laboratory studies, task 4 evaluating the results of instrumental studies, task 5 providing emergency care). Employees of the department also prepared didactic materials for the second part of the state exam: 230 situational tasks are covered 25 urgent conditions, laboratory and instrumental studies on 53 items of list (total number of tasks 250);
  - performing 5 medical manipulations from 16 items of the list.

For the first part of the practically oriented exam, folders were prepared - sets of reference information (tables for assessing physical development, center tables for assessing blood pressure in different age groups, normal indicators of "complex" additional analyses).

For the second part of the practically oriented final exam, the department provides dummies: "Pediatric life support simulator," "Newborn intubation simulator," "Newborn baby (doll)," "Model of the arm for injections," "Dummy of the infant (6-9 months)." Situational tasks are used with the results of laboratory and instrumental research methods (extracts from the history of diseases from the main sections "Gastroenterology," "Cardiology," "Pulmonology," "Nephrology," "Endocrinology," "Pediatrics of early age») 78 typical tasks in three languages (Ukrainian, Russian, English)

Besides, each student receives aset-folder that has the following tasks:

- forms of medical documentation to be completed by the student (the list of documentation was determined by the Department of Social Hygiene, 14 types of medical documentation).
- solving a typical task (174 tasks were compiled covering 91 diseases and 51 syndromes (lists 1 and 2 p.3 of the educational and qualification characteristics of a specialist).
  - writing prescriptions for essential medicines specified by the program (100 medicines in total).

The Department of Pediatrics No. 1 and Neonatology is the coordinator for licensing work from the Pediatrics section of Kharkiv National Medical University. This issue is considered at meetings of the department and the methodological commission on pediatrics and the methodological commission on "STEP-2" of KHNMU. Annually Test tasks are handed over by the department's employees, a bank of licensed tasks is distributed.

Availability of individual ranking of educational activity of the graduate.

Each student has an individual academic rating, which is filled in the certification sheets, separated for each group. Certification letters are used during examinations to analyze the current training activity of each student during the year.

During the second part of the practically oriented exam, the main medical base of the department - Kharkiv Regional Clinical Children Hospital was used. Students examined patients in all specialized hospital departments. By specialized departments, students received a set-folder of tasks for the exam.

Paragraphs 1 to 13 of the response protocol filled by students, where are represented the skills of graduates in examining a sick child. In paragraph 1, students note patient complaints important for determining diagnosis data of anamnesis and life. Paragraphs 2 to 6 reflect the student's ability to examine the patient, determine the general state, and physically examine the various systems of the child's body. In paragraph 7, students reflect ability to determine the leading syndrome of the disease, the most likely diagnosis or syndromic diagnosis. In the following paragraph 8, the student makes up an examination plan for the patient, and in paragraph 9 he demonstrates skills in assessing and interpreting the results of laboratory and instrumental research methods. Students reflect the ability to conduct differential diagnostics in paragraph 10. A preliminary clinical diagnosis is notated by students at paragraph 11. Further, in paragraph 12, 13, students determine the principles of treatment and tactics of patient management, events of prevention. In paragraph 14 of the response protocol, students fill in information about the completed medical documentation, and in paragraph 15 - the solution of the standard task.

During the taking of the first part of the final exam, attention is drawn to the level of practical training of the graduate, the ability to objectively examine patients, and the analysis of additional laboratory and instrumental research methods; ability to make a preliminary diagnosis, carry out a differential diagnosis and make up a reasonable plan for individual treatment of a sick child. Examiners give students points that reflect the level of skill assimilation by graduates. Doing of typical tasks of activity and skills is evaluated with points "1," "0.5," "0," and skills specified in

paragraphs 10, 11 - with points "1" or "0." Then all the points received by the student were summarized.

#### 3.2. Questions for credit and exam:

- 1. Differential diagnosis of pneumonia in children. Tactics of patient management in different clinical variants of pneumonia. Prevention of pneumonia, its complications in children.
- 2. Differential diagnosis of complications of pneumonia (pleurisy, abscess, pyothorax, pneumothorax) in children. Tactics of patient management in different clinical variants of pneumonia complications in children.
- 3. Differential diagnosis of cough syndrome in children. Bronchitis and bronchiolitis in children. Tactics of patient management in different clinical variants of bronchitis in children. Prevention of bronchitis and bronchiolitis in children.
- 4. Emergency care for acute respiratory failure depending on the cause and severity.
- 5. Differential diagnosis of bronchial asthma and bronchial obstruction syndrome on the background of acute respiratory diseases in children of different ages. Establishing a preliminary diagnosis. Tactics of patient management in different clinical variants of bronchoobstructive syndrome and its complications in children.
- 6. Providing emergency care for asthmatic status.
- 7. Prevention of bronchial asthma and bronchial obstruction syndrome on the background of acute respiratory diseases in children of different ages in children.
- 8. Differential diagnosis of chronic, hereditary and congenital diseases of the bronchopulmonary system (cystic fibrosis, idiopathic pulmonary hemosiderosis, primary ciliary dyskinesia, Wilms-Campbell syndrome, bronchomalacia, pulmonary aplasia, aplasia and hypoplasia of the lungs, antichoplasia, deficiency). Tactics of patient management in hereditary, congenital and chronic diseases of the bronchopulmonary system and their complications in children. Prevention of hereditary, congenital and chronic diseases of the bronchopulmonary system in children.
- 9. Differential diagnosis of inflammatory heart disease (myocarditis, endocarditis, pericarditis) in children. Tactics of managing a sick child with myocarditis, endocarditis, pericarditis.
- 10. Differential diagnosis of cardiomyopathies in children. Tactics of managing a sick child with cardiomyopathy.
- 11. Differential diagnosis of congenital heart defects in children. Tactics for children with congenital heart disease.
- 12. Providing emergency care for acute heart and vascular insufficiency in children.
- 13. Secondary prevention of infectious endocarditis in children.
- 14. Differential diagnosis of extrasystole, paroxysmal tachycardia, atrial fibrillation and complete atrio-ventricular block. Tactics of patient management with extrasystole, paroxysmal tachycardia, atrial fibrillation, complete atrioventricular block in children. Prevention of cardiac arrhythmias and conduction in children.
- 15. Emergency care for paroxysmal tachycardia, atrial fibrillation, MAC syndrome in children.
- 16. Differential diagnosis of systemic connective tissue diseases in children. Tactics of management of patients with systemic connective tissue diseases in children. Primary and secondary prevention of acute rheumatic fever in children.
- 17. Differential diagnosis of systemic vasculitis in children. Tactics of management of patients with systemic vasculitis in children.
- 18. Differential diagnosis of arthritis in children. Tactics of managing sick children. Prevention of reactive arthritis in children.
- 19. Differential diagnosis of functional (cyclic vomiting syndrome, functional dyspepsia) and organic (chronic gastritis, chronic gastroduodenitis, gastric ulcer and duodenal ulcer) diseases of the upper digestive tract in children. Tactics of children with functional and organic diseases of the upper digestive tract in children. Prevention of peptic ulcer disease and its complications. Providing emergency care in case of complicated peptic ulcer disease in children

- 20. Differential diagnosis of functional (abdominal pain, irritable bowel syndrome, functional constipation) and organic (nonspecific ulcerative colitis, Crohn's disease) intestinal diseases in children. Tactics of managing children with functional and organic diseases of the intestine.
- 21. Differential diagnosis of primary (disaccharide deficiency, exudative enteropathy, celiac disease, cystic fibrosis) and secondary (chronic enteritis, enterocolitis) disorders of intestinal absorption in children. Tactics of management of children at a primary and secondary syndrome of disturbance of intestinal absorption.
- 22. Differential diagnosis of biliary dyskinesias, acute and chronic cholecystitis in children. Tactics of management of sick children with biliary dyskinesias, acute and chronic cholecystitis. Prevention of biliary dyskinesias, acute and chronic cholecystitis in children.
- 23. Differential diagnosis of acute and chronic pancreatitis in children. Tactics of management of sick children at acute and chronic pancreatitis. Prevention of acute and chronic pancreatitis in children.
- 24. Differential diagnosis of chronic hepatitis of various etiologies in children. Tactics of patient management in chronic hepatitis in children, hypersplenism syndrome. Prevention of chronic hepatitis and portal

#### 3.3. Control questions:

- 1. Classification of cough in children.
- 2. The mechanism of cough in children.
- 3. Causes and management of acute cough in children.
- 4. Causes and management of subacute cough in children.
- 5. Causes and management of chronic cough in children.
- 6. Clinical classification and diagnosis of SARS in children.
- 7. Differential diagnosis of SARS of various etiologies in children.
- 8. Differential diagnosis of bronchitis in children.
- 9. Classification of shortness of breath in children.
- 10. Mechanisms of shortness of breath in children.
- 11. Etiological structure of nosocomial pneumonia in children.
- 12. Classification of pneumonia in children
- 13. Diagnosis of pneumonia.
- 14. General clinical and laboratory characteristics of acute respiratory failure in children.
- 15. Complications of pneumonia.
- 16. Principles of rational antibacterial therapy of pneumonia in children.
- 17. Etiology, pathogenesis of bronchial asthma in children.
- 18. Classification of bronchial asthma in children (according to GINA, 2017)
- 19. Diagnostic criteria and clinical manifestations of bronchial asthma in children.
- 20. Criteria for assessing the severity of bronchial asthma in children.
- 21. Basic principles of treatment of bronchial asthma in children.
- 22. Criteria for diagnosis and clinical manifestations of bronchial obstruction syndrome on the background of SARS.
- 23. Basic therapy of bronchial asthma in children.
- 24. Differential diagnosis of bronchial obstruction syndrome in children.
- 25. Basic principles of treatment of bronchial obstruction syndrome in children.
- 26. Leading clinical symptoms and syndromes in chronic and recurrent bronchitis, bronchiectasis.
- 27. Classification of chronic bronchitis.
- 28. Clinical manifestations of chronic bronchitis.
- 29. Principles of treatment of chronic bronchitis.
- 30. Classification of bronchiectasis.
- 31. Treatment of bronchiectasis, indications and contraindications to surgical treatment.

- 32. Features of the clinical course of chronic bronchopulmonary pathology in young children and adolescents.
- 33. Laboratory, instrumental and hardware methods of examination.
- 34. Complications of chronic pathology of the bronchopulmonary system in children.
- 35. What antibacterial drugs are prescribed depending on the pathogen and exacerbation.
- 36. Definition and classification of congenital malformations of the respiratory system.
- 37. Clinic, differential diagnosis and treatment of agenesis and aplasia of the lungs.
- 38. Simple and cystic hypoplasia of the lung and its lobes, clinic, differential diagnosis, the role of additional research methods, treatment.
- 39. Congenital tracheobronchomalacia, Williams-Campbell syndrome, congenital bronchomalacia, clinic, differential diagnosis, additional examination methods, features of bronchoscopy, the role of spirographic, immunological examinations.
- 40. Clinical and diagnostic features of the diagnosis of limited malformations of the tracheal wall and bronchi (congenital stenosis of the trachea; congenital lobar emphysema; diverticula of the trachea; and bronchi; tracheobronchitis fistulas). The role of related specialists in the diagnosis and treatment of these defects.
- 41. The role of congenital (true) cysts in the formation of chronic bronchopulmonary pathology in children. Acquired cysts "cellular lung", differential diagnosis, complications. The role of CT for the timely diagnosis of lung cysts.
- 42. Features of diagnosis of lung sequestration, indications for surgery.
- 43. Define and classify cardiomyopathies in children.
- 44. Diagnostic criteria for dilated cardiomyopathy.
- 45. Diagnostic signs and features of hypertrophic cardiomyopathy.
- 46. Diagnostic signs of restrictive cardiomyopathy.
- 47. Differential diagnosis of dilated cardiomyopathy.
- 48. Differential diagnosis of hypertrophic cardiomyopathy.
- 49. Differential diagnosis of restrictive cardiomyopathy from other variants of cardiomyopathies and cardiovascular diseases. Tactics of management and treatment of a child with dilated cardiomyopathy.
- 50. Heart transplantation. Indications and contraindications for surgery.
- 51. Tactics of management and treatment of a child with hypertrophic and restrictive cardiomyopathy.
- 52. Define systemic connective tissue disease. What diseases are systemic connective tissue diseases.
- 53. Define systemic vascular disease. Etiological factors of systemic vasculitis.
- 54. Clinical and diagnostic criteria for systemic lupus erythematosus.
- 55. Treatment of systemic lupus erythematosus.
- 56. Clinical and diagnostic criteria for systemic scleroderma.
- 57. Treatment of systemic scleroderma.
- 58. Clinical and diagnostic criteria for dermatomyositis.
- 59. Treatment of dermatomyositis.
- 60. Clinical and diagnostic criteria for Takayasu's disease
- 61. Criteria for the effectiveness of treatment of nodular periarteritis.
- 62. Clinical and diagnostic criteria of Charg-Strauss syndrome.
- 63. Clinical and diagnostic criteria for nodular periarteritis.
- 64. Criteria for Kawasaki disease, Takayasu's arteritis.
- 65. Name the possible clinical symptoms and syndromes of extrasystole, paroxysmal tachycardia, atrial fibrillation, complete atrioventricular block.
- 66. Clinical variants of paroxysmal tachycardia and atrial fibrillation in children.
- 67. Data from instrumental studies in extrasystole, paroxysmal tachycardia, atrial fibrillation, complete atrioventricular block.

- 68. Differential diagnosis of extrasystole, paroxysmal tachycardia, atrial fibrillation and complete atrio-ventricular block.
- 69. Tactics of patient management with extrasystole, paroxysmal tachycardia, atrial fibrillation, complete atrioventricular block in children.
- 70. Emergency care for paroxysmal tachycardia, atrial fibrillation, Morgan-Adams-Stokes syndrome in children.
- 71. What information from the history of the disease, family history and life history are used to determine congenital heart disease
- 72. Diagnostic criteria for congenital heart defects with overflow of the small circulation, with impoverishment of the small circulation, as well as congenital heart defects with impoverishment of the large circulation.
- 73. Name the main nosological forms of congenital heart disease with cyanosis ("blue" type) and without cyanosis ("pale" type).
- 74. Features of diagnostic signs in children with congenital heart defects.
- 75. Differential diagnosis of congenital heart defects in children.
- 76. Tactics of management and treatment of children with congenital heart defects.
- 77. Give the classification of chronic heart failure in children.
- 78. Name the main causes and clinical signs characteristic of children with acute right ventricular failure syndrome.
- 79. Diagnostic criteria for right ventricular heart failure.
- 80. Treatment of children with acute right ventricular heart failure.
- 81. Name the main causes and clinical signs characteristic of children with acute left ventricular failure syndrome.
- 82. Diagnostic criteria for left ventricular heart failure.
- 83. Treatment of children with acute left ventricular heart failure.
- 84. Modern views on the etiology and pathogenesis of arthritis in children (JRA, reactive arthritis).
- 85. Classification of chronic arthritis (juvenile rheumatoid arthritis, reactive arthritis) in children.
- 86. The main clinical syndromes of chronic arthritis (juvenile rheumatoid arthritis, reactive arthritis) in children.
- 87. Differential diagnosis of chronic arthritis
- 88. Laboratory and instrumental diagnosis of chronic arthritis
- 89. Modern approaches to the treatment of chronic arthritis
- 90. Principles of dispensary supervision of patients with chronic arthritis (JRA, reactive arthritis) in children.
- 91. Differential diagnosis of abdominal pain syndrome in children.
- 92. Etiology and pathogenesis of organic diseases of the esophagus and stomach in children.
- 93. Classification of diseases of the esophagus and stomach in children.
- 94. Clinical criteria of gastroesophageal reflux disease in children.
- 95. Tactics of managing children with gastroesophageal reflux disease.
- 96. Clinical criteria for chronic gastritis in children
- 97. Differential diagnosis of hypoacid and hyperacid gastritis.
- 98. Differential diagnosis of peptic ulcer of the stomach and duodenum.
- 99. Complications of peptic ulcer of the stomach and duodenum in children.
- 100. Laboratory-instrumental diagnosis of gastroesophageal reflux disease, diseases of the stomach and duodenum in children.
- 101. Principles of management of children with organic diseases of the upper digestive tract.
- 102. Etiological factors of dyskinetic disorders of the biblical tract in children. Clinical and laboratory manifestations of cytolysis syndrome.
- 103. Classification of functional disorders of the biliary tract in children. Clinical and laboratory manifestations of cholestasis syndrome.

- 104. The main etiological factors of toxic liver damage.
- 105. Clinical and laboratory criteria for synthetic liver failure.
- 106. Classification of liver cirrhosis by morphological changes.
- 107. Classification of hereditary diseases of accumulation, which are accompanied by hepatolienal syndrome.
- 108. Classification of liver cirrhosis by etiological factors.
- 109. Clinical and diagnostic criteria for the differential diagnosis of liver cirrhosis and chronic hepatitis with pronounced activity.
- 110. Basic principles of therapy of children with chronic hepatitis.
- 111. Laboratory-instrumental diagnosis of portal hypertension syndrome in children.
- 112. Principles of management of children with diseases of the hepatobiliary tract.
- 113. Etiology and pathogenesis of organic intestinal diseases in children.
- 114. Classification of intestinal diseases in children
- 115. Differential diagnosis of constipation syndrome in children.
- 116. Laboratory and instrumental diagnosis of intestinal diseases in children.
- 117. Clinical criteria for Crohn's disease in children
- 118. Tactics of managing children with Crohn's disease
- 119. Clinical criteria of ulcerative colitis in children.
- 120. Tactics of managing children with ulcerative colitis.
- 121. Clinical criteria for nonspecific ulcerative colitis in children.
- 122. Tactics of management of children with nonspecific ulcerative colitis.
- 123. Clinical and diagnostic criteria for irritable bowel syndrome in children
- 124. Basic principles of treatment of children with irritable bowel syndrome
- 125. Etiology of acute and chronic glomerulonephritis (GN).
- 126. Pathogenesis of acute and chronic glomerulonephritis.
- 127. Classification of acute and chronic glomerulonephritis.
- 128. Clinic of acute GN (nephrotic, nephritic, isolated urinary syndrome).
- 129. Give the stage of development of acute renal failure?
- 130. Give indications for hemodialysis in acute renal failure?
- 131. What are the causes of chronic renal failure in children?
- 132. What are the general principles of treatment of children with chronic renal failure?
- 133. Give recommendations on dietary nutrition in the period of a detailed clinical picture of chronic renal failure
- 134. The main laboratory and instrumental methods of research of children at suspicion of emergence of infectious-inflammatory process in kidneys?
- 135. Causes of urinary tract infections in children?
- 136. Define the concepts: dysuria, urinary tract infections, acute pyelonephritis, acute cystitis?
- 137. The main clinical and laboratory criteria for the diagnosis of acute pyelonephritis in children?
- 138. The main clinical and diagnostic signs of acute cystitis in children?
- 139. What are the main causes of primary tubulopathies?
- 140. What are the clinical and laboratory signs characteristic of phosphate diabetes (renal tubular rickets)?
- 141. Prevention of hereditary kidney disease.
- 142. The scheme of hematopoiesis in children depending on age.
- 143. Scheme of examination of the peripheral lymphatic system.
- 144. Classification of leukimoid reactions
- 145. The main factors in the development of leukimoid reactions: lymphoid and myeloid types
- 146. Plan of examination of patients with suspected hemoblastosis, in the presence of leukimoid reaction.
- 147. Differential diagnosis of thrombocytosis, the main factors of their occurrence.

- 148. Examination plan for a patient with eosinophilia
- 149. What information from the history of the disease, family history and life history are used to determine hypertension?
- 150. Diagnostic criteria for determining the categories of blood pressure and severity of hypertension in children.
- 151. Name the main clinical and diagnostic signs that are characteristic of children with hypertension.
- 152. Features of diagnostic signs in children with arterial hypertension
- 153. Differential diagnosis of primary and erythematous arterial hypertension in children.
- 154. Tactics of management and treatment of children with hypertension.
- 155. Mechanisms of hyperbilirunemia in premature infants. Possible consequences for them. Driving tactics.
- 156. Leading symptoms of jaundice in newborns.
- 157. Methods of examination of newborns during hyperbilirubinemia and their interpretation.
- 158. Differential diagnosis of jaundice in newborns.
- 159. Classification of hemolytic disease of newborns (GHN).
- 160. Clinical and laboratory criteria for anemic, icteric and edematous forms of GHN.
- 161. Criteria for the severity of GHN.
- 162. Stages of bilirubin encephalopathy.
- 163. Methods of antenatal diagnosis and prevention of hemolytic disease of the fetus.
- 164. Methods of conservative therapy of GHN. The mechanism of action of phototherapy.
- 165. Indications for replacement blood transfusion.
- 166. Methods of replacement blood transfusion surgery and its possible complications.
- 167. Clinical variants of hypoxic-ischemic lesions of the CNS in children.
- 168. Data of laboratory and instrumental researches at perinatal defeats of the central nervous system at children.
- 169. Differential diagnosis of perinatal CNS lesions in infants.
- 170. Tactics of management of children with perinatal pathology of the central nervous system in the clinic.
- 171. Hyperthermic syndrome in children. Etiology. Clinical diagnosis.
- 172. Variants of fever in children.
- 173. Providing emergency care to children with hyperthermia.
- 174. Convulsive syndrome in children. Causes. Diagnosis.
- 175. Features of emergency care for children with convulsive syndrome of various etiologies.
- 176. Acute respiratory failure. Etiology. Pathogenesis. Classification. Diagnosis.
- 177. Principles of providing emergency care to children with manifestations of acute respiratory failure.
- 178. Pulse oximetry, capnography. The method of determining and interpreting the results of the analysis of the partial pressure of gases, acid-base status of blood in children.
- 179. The choice of method of correction of respiratory failure in children of different ages.

Options and bases of a choice of parameters of IVL.

- 180. Acute stenotic laryngotracheitis.
- 181. Foreign body in the respiratory tract.
- 182. Acute bronchiolitis, acute obstructive bronchitis, asthmatic condition.
- 183. Syndrome of intrapleural tension.
- 184. The role of self-control in the prevention of complications of type 1 diabetes (acute and chronic);
- 185. Causes of hyperglycemic, hypoglycemic coma.
- 186. Stages of development of diabetic coma;
- 187. Clinical manifestations of hyperglycemic, hypoglycemic coma.
- 188. Measures at the prehospital and hospital stages in hyperglycemic, hypoglycemic insects.

- 189. Prevention of complications, treatment of ketoacidosis (cerebral edema, DIC syndrome, pulmonary edema, acute heart failure, hypoglycemia);
- 190. Causes of hypoglycemic coma, clinical manifestations of coma;
- 191. Treatment measures for hypoglycemic conditions and hypoglycemic coma;
- 192. Pathogenesis of late complications of diabetes: diabetic nephropathy, neuropathy,
- 193. cataract, encephalopathy, dermopathy (necrobiosis, diabetic foot).
- 194. Treatment of late complications of diabetes.
- 195. List the hormones produced by the adenohypophysis. What is the term for decreased adenohypophysis function?
- 196. List the hormones secreted by the neurohypophysis. What is the term for increased adenohypophysis function?
- 197. What is hypopituitarism, what types of hypopituitarism do you know?
- 198. List the clinical signs of hyperproduction of somatotropic hormone, provide diagnostic criteria, name the relevant disease and principles of treatment.
- 199. List the clinical signs of hypoproduction of somatotropic hormone, provide diagnostic criteria, name the relevant disease and principles of treatment.
- 200. List the clinical signs of hyperproduction of adrenocorticotropic hormone, provide diagnostic criteria, name the relevant disease and principles of treatment.
- 201. List the clinical signs of hypoproduction of adrenocorticotropic hormone, provide diagnostic criteria, name the relevant disease and principles of treatment.
- 202. List the clinical signs of vasopressin hypoproduction, provide diagnostic criteria, name the relevant disease and principles of treatment.
- 203. List the clinical signs of vasopressin hyperproduction, provide diagnostic criteria, name the relevant disease and principles of treatment.
- 204. List the clinical signs of hyperproduction of prolactin, provide diagnostic criteria, name the disease and principles of treatment.
- 205. List the clinical signs of gonadotropin hyperproduction, provide diagnostic criteria, name the disease and principles of treatment.
- 206. List the clinical signs of gonadotropin hypoproduction, provide diagnostic criteria, name the disease and principles of treatment.
- 207. Give the classification of degrees of goiter according to the WHO.
- 208. Definition and clinical criteria of endemic goiter in children.
- 209. What are the measures to prevent endemic goiter in children.
- 210. Criteria for the diagnosis of congenital hypothyroidism in the neonatal period.
- 211. Doses of L-thyroxine for the treatment of congenital hypothyroidism.
- 212. Criteria for the effectiveness of treatment of congenital hypothyroidism.
- 213. Name the ocular symptoms that characterize the hyperfunction of the thyroid gland.
- 214. Laboratory criteria for the diagnosis of accidents.
- 215. Name the drugs of thyrostatics and their dosage in case of an accident.

#### 3.4. Individual tasks

#### **Assessment of individual student tasks** is carried out by the teacher:

- 10 points publication of the article in publications included in scientometric databases
- 9 points presentation at international scientific student conferences or other forums outside Ukraine with the publication of work in conference materials
- 8 points participation in international scientific student conferences with the publication of work in the conference materials,
- 7 points participation in intra-university and inter-university olympiads and student scientific conferences with the publication of the work (with a prize)

- 6 points participation in intra-university and inter-university competitions and student scientific conferences with the publication of the work (without receiving a prize)
- 5 points writing an essay on the topic or a description of a clinical case (case study), creating a video or other digital versions of visual material.

Scores for individual student tasks (a total of not more than 10 points) can be added as an incentive additional points to the final score for current learning activities, calculated using Table 1 and are part of the assessment of the discipline.

#### 3.5. Rules for appealing the assessment

The procedure for appealing is carried out in accordance with the order № 150 of 24.06.2021 on approval of the new version of the "Regulations on the procedure for deduction, renewal and transfer of persons", and approved by the order of KhNMU from 30.09.2020 №252 "Regulations on appeal Education of Kharkiv National Medical University".

Link:

http://www.knmu.kharkov.ua/index.php?option=com\_content&view=article&id=1226%3A2013-03-25-12-07-55&catid=4%3A2011-05-04-07-20-12&Itemid=19&lang=uk

#### 4. THE POLITICS AND VALUES OF DISCIPLINE.

In order to successfully complete the relevant course, it is necessary to attend practical classes regularly; to have theoretical preparation for practical classes; not to be late and not to miss classes; perform all necessary tasks and work actively during each lesson; be able to work in a group; contact the curators of the course on various issues on the subject of classes and receive it when you need it.

Students can discuss different tasks, but their performance is strictly individual. You are not allowed to write off, use any kind of software, tips, use a mobile phone, tablet or other electronic gadgets during classes for purposes other than the learning process. Students are not allowed to be late for practical classes.

Visiting patients during the curation in the hospital is possible, provided that students have the appropriate uniform, a health book with a note about the timely medical examination.

Students with special needs can meet with the teacher or warn him before the start of classes, it can be done by the head of the group on the students request. If you have any questions, please contact the teacher.

Students' participation in research and conferences on this topic is encouraged. All students of KhNMU are protected by the Regulations on prevention and settlement of Cases Related to Sexual Harassment and Discrimination at Kharkiv National Medical University, designed to determine an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. on the basis of the following regulations of Ukraine: Constitution of Ukraine; Law of Ukraine "On Education"; Law of Ukraine "On Higher Education"; Law of Ukraine "On Principles of Prevention and Counteraction of Discrimination in Ukraine"; Law of Ukraine "On Ensuring Equal Rights and Opportunities for Women and Men"; Convention for the Protection of Human Rights and Fundamental Freedoms; Convention for the Suppression of Discrimination in Education; Convention on the Elimination of All Forms of Discrimination against Women; General Recommendation № 25 to Article 4, paragraph 1, of the Convention on the Elimination of All Forms of Discrimination against Women, General Comment № 16 (2005) "Equal rights for men and women to use economic, social and cultural rights" (Article 3 of the International Covenant on Economic, Social and Cultural Rights; Committee on Economic, Social and Cultural Rights of the United Nations); education in the spirit of respect for human rights and fundamental

freedoms (UNESCO), the Concept of the State Social Program for Equal Rights and Opportunities for Women and Men until 2021. Kharkiv National Medical University ensures education and work, that is free from discrimination, sexual harassment, intimidation or exploitation. The University admits the importance of confidentiality. All persons, responsible for the implementation of this policy, (staff of deans' offices, faculties, institutes and the Center of Gender Education, members of the student government and ethics committee, vice-rector for research and teaching) are confidential, regarding those, who report or accuse of discrimination. or sexual harassment (except where the law requires disclosure and / or when disclosure by the University is necessary to protect the safety of others).

KhNMU creates a space of equal opportunities, free from discrimination of any national, racial or ethnic origin, sex, age, disability, religion, sexual orientation, gender, or marital status. All rights, privileges, programs and activities, granted to students or staff of the University, apply to anybody, without exception, in case they are properly qualified. The anti-discrimination policy and the policy of counteracting sexual harassment of KhNMU are confirmed by the Codex of Corporate Ethics and the Charter of KhNMU.

#### The rules of behavior in University and on classes

It is important for students to follow the rules of good behavior at the university. These rules are common to all, they also apply to all teachers and staff and are not fundamentally different from the generally accepted norms.

During classes it is allowed:

- leave the audience for a short time if necessary and with the permission of the teacher;
- drink soft drinks;
- take photos of presentation slides;
- take an active part in the class

#### Forbidden:

- eat (except for persons whose special medical condition requires another in this case, medical confirmation is required);
- smoking, drinking alcohol and even low-alcohol beverages or drugs;
- use obscene language or use words that offend the honor and dignity of colleagues and faculty;
- - gambling;
- to damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);
- shouting, shouting or listening to loud music in classrooms and even in corridors during classes.

#### 5. ACADEMIC INTEGRITY

The Department of Pediatrics №1 and Neonatology has zero tolerance to any form of the plagiarism. Students are expected to constantly raise their awareness on the academic writing. The first lessons will provide information on what to consider plagiarism and how to properly conduct research and scientific research.

Follow the link for more information at: Regulations on academic integrity and ethics of academic relations at Kharkiv National Medical University

http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog\_ad\_etyka\_text.pdf http://www.knmu.kharkov.ua/index.php?option=com\_content&view=article&id=2520%3A2015 -04-30-08-10-46&catid=20%3A2011-05-17-09-30-17&Itemid=40&lang=uk

http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/kodex\_AD.docx

#### 6. RECOMMENDED LITERATURE

- 1. Nelson Textbook of Pediatrics 21th Edition. Robert M. Kliegman, JosephSt. Geme. Publisher: Elsevier. 2019. P. 4112.
- 2. Pediatric Gastritis Clinical Practice Guidelines Joint Recommendation of the ESPGHAN/NASPGAN, Update 2017)
- 3. Guideline for the Evaluation of Cholestatic Jaundice in Infants: Joint Recommendations of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition and the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition. JPGN Volume 64, Number 1, January 2017.
- 4. Peripheral lymphadenopathy in children: Etiology Literature review current through: Aug 2017. | This topic last updated: Mar 30, 2017.Author: Kenneth L McClain, MD, PhD Section Editors: Jan E Drutz, MD, Sheldon L Kaplan, MD, Donald H Mahoney, Jr, MD. Deputy Editor: Mary M Torchia, MD https://www.uptodate.com/contents/peripheral-lymphadenopathy-in-childrenetiology
- 5. American Diabetes Association (2018) 15. Diabetes Advocacy: Standards of Medical Care in Diabetes-2018. Diabetes Care. Jan., 41(Suppl. 1): S152–S153
- 6. Guidelines for vitamin K prophylaxis in newborns. Eugene Ng, Amanda D. Loewy, Fetus and Newborn Committee Paediatr Child Health 2018, 23(6):394–397.
- 7. Guidelines for Acute Care of the Neonate. Edition 26, 2018–2019. Updated: July 2018. 251 p.
- 8. Neonatal jaundice. December 2017. MN17.7-V7-R22. Queensland Clinical Guidelines Health professionals in Queensland public and private maternity and neonatal services. Review date: December 2022
- 9. Recommendations for V-VI students, Higher medical education institutions of the III-IV accreditation levels studying in English «Leukemoid reactions in children» KhNMU, 2017.
- 10. Recommendations for V-VI students, Higher medical education institutions of the III-IV accreditation levels studying in English «Modern approaches to the diagnostics of the most common endocrine problems in children"KhNMU, 2017.
- 11. Recommendations for V-VI students, Higher medical education institutions of the III-IV accreditation levels studying in English «Differentiated diagnosis of inflammatory kidney diseases in children» KhNMU, 2019.
- 12. Recommendations for V-VI students, Higher medical education institutions of the III-IV accreditation levels studying in English «Differentiated diagnosis of inflammatory lower respiratory tract»KhNMU, 2019.

#### 7. INFORMATION RESOURCES

**Internet resources:** http://www.medscape.com, http://www.orpha.net, https://www.aace.com/, http://www.endocrinology.org, http://www.cochranelibrary.com/

#### 8. OTHER

#### **Useful links:**

Provisions on prevention, prevention and settlement of cases related to sexual harassment and discrimination in KhNMU <a href="http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog-sex.doc">http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog-sex.doc</a>

Regulations on Academic Integrity and Ethics of Academic Relations at Kharkiv National Medical University <a href="http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog\_ad\_etyka\_text.pdf">http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog\_ad\_etyka\_text.pdf</a>

The order of conducting classes on in-depth study by students of Kharkiv National Medical University of certain disciplines beyond the scope of the curriculum <a href="http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/nak-poriad-pogl-vyv-dysc.docx">http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/nak-poriad-pogl-vyv-dysc.docx</a>

Regulations on the Commission on Academic Integrity, Ethics and Conflict Management of KhNMU

http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog\_komis\_ad\_text.pdf

Regulations on the recognition of the results of non-formal education at Kharkiv National Medical University

http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/polog\_neform\_osv.pdf

#### **INCLUSIVE EDUCATION:**

http://www.knmu.kharkov.ua/index.php?option=com\_content&view=article&id=7 108%3A2021-03-10-14-08-02&catid=12%3A2011-05-10-07-16-32&Itemid=33&lang=uk

#### **ACADEMIC INTEGRITY:**

http://www.knmu.kharkov.ua/index.php?option=com\_content&view=article&id=2 520%3A2015-04-30-08-10-46&catid=20%3A2011-05-17-09-30-17&Itemid=40&lang=uk

http://files.knmu.edu.ua:8181/upload/redakt/doc\_uchproc/kodex\_AD.docx