

**MINISTRY OF HEALTH**  
**Danylo Halytsky Lviv National Medical University**  
**Pediatrics Infectious Diseases Department**

**APPROVED**

Actin First Vice-Rector for Scientific and Pedagogical Affairs

Danylo Halytsky Lviv National Medical  
University  
Associate Professor Iryna SOLONYNKO

“ \_\_\_\_\_ ” \_\_\_\_\_ 2022 y



**STUDY PROGRAM**  
**OF THE DISCIPLINE**  
**OK. 38 "PEDIATRIC INFECTIOUS DISEASES"**  
training of specialists of the second (master's) level of higher  
education  
field of knowledge 22 "Health care"  
specialty 222 "General Medicine"

**Discussed and approved**  
**at the methodological meeting of the**  
**Pediatric**  
**Infectious Diseases Department**  
**Protocol № 11 from "13" May 2022**  
**Head of the Department**  
**Assoc. Prof. Halyna LYTVYN**

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**APPROVED**  
**At the meeting of the specialized**  
**methodical committee on pediatric**  
**disciplines Protocol № 3 from**  
**"13" June 2022**  
**Head of the specialized**  
**methodical commission**  
**Prof. Lesya BESH**

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**PROGRAMMERS:**

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**REVIEWERS:**

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### **Changes and additions to the academic discipline program for 2022-2023**

<b>№</b>	<b>Content of the changes</b>	<b>Date and № of the protocol of the meeting of the department</b>	<b>Notes</b>

Head of the Department of Pediatric Infectious Diseases  
associate professor, PhD, MD Lytvyn H.O.

**INTRODUCTION**  
**The program of study of discipline**  
**"Pediatric infectious diseases"**

according to the Standard of higher education of the second (master's) level  
 field of knowledge 22 "Health Care "  
 specialty 222 " General Medicine"  
 educational program of master of medicine

**Course description (abstract)**

Course "Pediatric Infectious Diseases":

a) is based on the knowledge acquired by students in the study of medical biology, normal and pathological physiology, normal and pathological anatomy, microbiology, histology, pharmacology, pediatric disease and integrates with these disciplines;

b) lay the foundations for students to develop skills and competences that are determined by the ultimate goals of studying pediatrics as an independent discipline and can be used by students in the study of pediatrics, childhood infectious diseases and other clinical disciplines in V and VI courses and in professional activity.

Structure of the discipline	Number of credits, hours, of them				Year of study	Number Practical classes	type of control
	Total	Auditorium		Self study			
		Lectures	Practical classes				
"Pediatric infectious diseases" Content modules 3	1,5 credit ECTS / 45 hours	6	17	22	5 course IX / X semester	4	credit

Auditory load – 51%, Self study– 49%

**The subject of study of the discipline** are the main manifestations of childhood infectious diseases, the principles of correct interpretation of clinical information obtained during examination of the patient, and the basic principles of treatment patients with infectious pathology

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**Interdisciplinary connections:** normal anatomy, biochemistry, pathological physiology, pharmacology, pediatrics, surgery, infectious diseases, neurology, microbiology, epidemiology, immunology.

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## **1. PURPOSE AND TASKS OF THE EDUCATIONAL DISCIPLINE**

### **1.1. The purpose of teaching the educational discipline "Pediatric Infectious Diseases" is:**

the assimilation of theoretical and practical knowledge of etiology, pathogenesis, classification, clinical manifestations, methods of diagnosis, treatment and prevention of the most common non-infectious and infectious diseases of childhood and the skills of clinical, laboratory and instrumental examination of a child in compliance with the principles of medical ethics and deontology, the acquisition by the student of professional medical record keeping skills.

The student's acquisition of knowledge and professional skills in the differential diagnosis of the most common infectious and non-infectious diseases of childhood, dispensary supervision of healthy and sick children in outpatient settings and the provision of emergency care for the most common emergency conditions in children based on knowledge of age-related anatomical and physiological features of the child's body;

Formation of the ability to use knowledge, abilities, skills and understanding to solve typical tasks of a doctor in the field of health care, the scope of which is provided by defined lists of syndromes and symptoms of diseases, emergency conditions, physiological conditions.

Training of a highly qualified specialist (doctor) capable of solving complex tasks and problems in the field of medicine and health care or in the process of training, characterized by the uncertainty of conditions and requirements and performing the professional activities of a doctor; capable of continuing education with a high degree of autonomy.

The final goals of the educational discipline "Pediatric Infectious Diseases" are based on the educational goals defined in the educational and professional program (EPP). They are defined as follows:

1. To determine the etiological and pathogenetic factors of the most common childhood infectious diseases.
2. Classify and analyze the typical clinical picture of the most common infectious diseases of childhood.
3. Make an examination plan and analyze the data of laboratory and

instrumental examinations during the typical course of the most common infectious diseases, demonstrate mastery of the principles of treatment, rehabilitation and prevention of the most common childhood infectious diseases.

4. Diagnose and provide emergency care for the most common childhood infectious diseases.

5. Demonstrate mastery of the moral and deontological principles of a medical specialist and the principles of professional subordination in pediatrics.

**1.2. The main tasks of studying the discipline "Pediatric Infectious Diseases" are:**

- Acquisition of basic theoretical knowledge of the most common infectious and non-infectious diseases of childhood, dispensary supervision of healthy and sick children in outpatient settings.

- Mastering basic practical skills and abilities in diagnosis, differential diagnosis, treatment of complicated and uncomplicated forms of the course of the most common non-infectious and infectious childhood diseases;

- Mastering the basic practical skills and abilities to provide emergency care in emergency situations in the case of the most common non-infectious and infectious diseases of childhood.

- Maintenance of medical documentation.

- Formation of students' moral-ethical and deontological qualities during professional communication with a sick child and persons who care for the child.

**1.3 Competencies and learning outcomes**, the formation of which is facilitated by the discipline (relationship with the normative content of the training of higher education applicants, formulated in terms of learning outcomes in the Higher Education Standard).

According to the requirements of the Higher Education Standard, the discipline ensures that students acquire the following competencies:

- *integral*: The ability to solve complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.

- *general*:

1. Ability to abstract thinking, analysis and synthesis.

2. The ability to learn and master modern knowledge.

3. Ability to apply knowledge in practical situations.

4. Knowledge and understanding of the subject field and understanding of professional activity.

5. Ability to adapt and act in a new situation.

6. Ability to make informed decisions.

7. Ability to work in a team.

8. Ability to interpersonal interaction.

9. Ability to communicate in a foreign language.

10. Ability to use information and communication technologies.

11. Ability to search, process and analyze information from various sources.

12. Determination and persistence in relation to assigned tasks and assumed responsibilities.

13. Awareness of equal opportunities and gender issues.

14. The ability to realize one's rights and responsibilities as a member of society, to realize the values of a civil (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.

15. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, to use various types and forms of motor activities for active recreation and leading a healthy lifestyle.

- *Professional competences of the specialty (PC):*

1. Ability to collect medical information about the patient and analyze clinical data.

2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.

3. The ability to establish a preliminary and clinical diagnosis of the disease.

5. The ability to determine the nature of nutrition in the treatment and prevention of diseases.

6. Ability to determine the principles and nature of treatment and prevention of diseases.

7. Ability to diagnose emergency conditions.

8. Ability to determine tactics and provide emergency medical care.

10. Ability to perform medical manipulations.

11. Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility.

13. Ability to carry out sanitary and hygienic and preventive measures.

14. Ability to plan and carry out preventive and anti-epidemic measures regarding infectious diseases.

16. Ability to maintain medical documentation, including electronic forms.

21. Clearly and unambiguously communicate one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to students.

23. Ability to develop and implement scientific and applied projects in the field of health care.

24. Compliance with ethical principles when working with patients and laboratory animals.

25. Observance of professional and academic integrity, bear responsibility for the reliability of the obtained scientific results.

Detailing of competencies in accordance with the NQF descriptors in the form of the "Competence Matrix".

## Competence Matrix

<b>№</b>	<b>Competence</b>  (Classification of competences according to NQF)	<p><b>Knowledge</b> <b>Kn1</b> Specialized conceptual knowledge that includes modern scientific achievements in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research</p> <p><b>Kn2</b> Critical understanding of problems in the field and at the border of the fields of knowledge</p>	<p><b>Skill/ Practice</b> <b>Sk1</b> Specialized skills/problem-solving skills required for conducting research and/or implementing innovative activities to develop new knowledge and procedures</p> <p><b>Sk2</b> Ability to integrate knowledge and solve complex problems in broad or multidisciplinary contexts</p> <p><b>Sk3</b> Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and</p>	<p><b>Communication</b> <b>C1</b> Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying</p> <p><b>C2</b> Use of foreign languages in professional activities</p>	<p><b>Autonomy and responsibility</b> <b>AR1</b> Management of work and learning processes that are complex, unpredictable and require new strategic approaches</p> <p><b>AR2</b> Responsibility for contributing to professional knowledge and practice and/or evaluating the results of team and collective activities</p> <p><b>AR3</b> Ability to continue learning with a high degree of autonomy</p>
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			ethical responsibilities		
<b>Integral competence</b>					
The ability to solve complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.					
<b>General competences</b>					
1.	Ability to abstract thinking, analysis and synthesis.	<b>Kn 1</b>	<b>Pr 1</b>	<b>C 1</b>	<b>AR 1</b>
2.	Ability to learn and acquire modern knowledge.	<b>Kn 1</b>	<b>Pr 3</b>	<b>C 2</b>	<b>AR 3</b>
3.	Ability to apply knowledge in practical situations	<b>Kn 1</b>	<b>Pr 2</b>	<b>C 1</b>	<b>AR 1</b>
4.	Knowledge and understanding of the subject field and understanding of professional activity	<b>Kn 2</b>	<b>Pr 2</b>	<b>C 2</b>	<b>AR 2</b>
5.	Ability to adapt and act in a new situation.		<b>Pr 3</b>		<b>AR 2</b>
6.	Ability to make an informed decision.	<b>Kn 1</b>	<b>Pr 3</b>	<b>C 1</b>	<b>AR 1</b>
7.	Ability to work in a team.	<b>Kn 2</b>	<b>Pr 3</b>	<b>C 1</b>	<b>AR 2</b>
8.	Interpersonal skills	<b>Kn 1</b>	<b>Pr 3</b>	<b>C 1</b>	<b>AR 2</b>
9.	Ability to communicate in a foreign language.			<b>C 2</b>	
10	Ability to use information and	<b>Kn 2</b>	<b>Pr 3</b>	<b>C 2</b>	<b>AR 3</b>

	communication technologies.				
11	Ability to search, process and analyze information from various sources.	<b>Kn 2</b>	<b>Pr 2</b>	<b>C 2</b>	<b>AR 2</b>
12	Determination and persistence in relation to assigned tasks and assumed responsibilities	<b>Kn 2</b>	<b>Pr 3</b>		<b>AR 3</b>
13	Awareness of equal opportunities and gender issues.	<b>Kn 2</b>	<b>Pr 1</b>	<b>C 1</b>	<b>AR 1</b>
14	The ability to realize one's rights and responsibilities as a member of society, to realize the values of a civil (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.	<b>Kn 1</b>	<b>Pr 2</b>	<b>C 1</b>	<b>AR 3</b>
15	The ability to preserve and multiply moral, cultural, scientific values and	<b>Kn 2</b>	<b>Pr 3</b>		<b>AR 3</b>

<p>achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, to use various types and forms of motor activity for active recreation and leading a healthy lifestyle.</p>				
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**Special (professional) competence**

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

1.	<p>Ability to collect medical information about the patient and analyze clinical data.</p>	<p><b>Kn 2</b></p>	<p><b>Pr 3</b></p>	<p><b>C 2</b></p>	<p><b>AR 2</b></p>
2.	<p>Ability to determine the necessary list of laboratory and instrumental</p>	<p><b>Kn 2</b></p>	<p><b>Pr 3</b></p>		<p><b>AR 1</b></p>

	studies and evaluate their results				
3.	Ability to establish previous clinical diagnosis disease	<b>Kn 2</b>	<b>Pr 3</b>		<b>AR 2</b>
5.	The ability to determine the nature of nutrition in the treatment and prevention of diseases.	<b>Kn 2</b>	<b>Pr 1</b>	<b>C 1</b>	<b>AR 1</b>
6.	Ability to determine the principles and nature of treatment and prevention of diseases	<b>Kn 2</b>	<b>Pr 3</b>	<b>C 1</b>	<b>AR 1</b>
7.	Ability to diagnose emergency conditions	<b>Kn 2</b>	<b>Pr 3</b>	<b>C 1</b>	<b>AR 2</b>
8.	The ability to determine the tactics of providing emergency medical care	<b>Kn 2</b>	<b>Pr 3</b>	<b>C 1</b>	<b>AR 2</b>
10	Ability to perform medical manipulations	<b>Kn 1</b>	<b>Pr 3</b>	<b>C 1</b>	<b>AR 1</b>
11.	Ability to solve medical problems in new or unfamiliar environments in the presence of	<b>Kn 2</b>	<b>Pr 3</b>	<b>C 1</b>	<b>AR 2</b>

	incomplete or limited information, taking into account aspects of social and ethical responsibility.				
13.	Ability to carry out sanitary and hygienic and preventive measures.	<b>Kn 2</b>	<b>Pr 2</b>	<b>C 1</b>	<b>AR 2</b>
14.	Ability to plan and carry out preventive and anti-epidemic measures for infectious diseases.	<b>Kn 2</b>	<b>Pr 3</b>	<b>C 1</b>	<b>AR 2</b>
16.	Ability to maintain medical documentation, including electronic forms.	<b>Kn 2</b>	<b>Pr 1</b>	<b>C 1</b>	<b>AR 1</b>
21.	Available and unambiguous to convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying.	<b>Kn 2</b>	<b>Pr 3</b>	<b>C 2</b>	<b>AR 2</b>
23.	Ability to develop and implement	<b>Kn 2</b>	<b>Pr 3</b>	<b>C 2</b>	<b>AR 3</b>

	scientific and applied projects in the field of health care.				
24.	Adherence to ethical principles when working with patients and laboratory animals.	<b>Kn 1</b>	<b>Pr 2</b>	<b>C 1</b>	<b>AR 1</b>
25.	Adherence to professional and academic integrity, bear responsibility for the reliability of the obtained scientific results	<b>Kn 2</b>	<b>Pr 2</b>	<b>C 2</b>	<b>AR 3</b>

## LEARNING OUTCOMES:

### *Distribution of learning outcomes by types of learning activities*

<b>The competencies that the applicant must master</b>	<b>Program learning outcomes</b>	<b>Name of academic disciplines, practitioners</b>
<b>GC 1 - 15 PC 1 - 3, 5 - 8, 10, 11, 13, 14, 16, 21, 23 - 25.</b>	<b>PLO 1 - 7, 9, 10, 12-14, 17, 18, 20 - 22, 24, 25, 29</b>	<b>Infectious diseases Pediatric infectious diseases</b>

### **Integrative final program learning outcomes, the formation of which is facilitated by the educational discipline:**

1. Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.

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

3. Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and interdisciplinary problems related to it.

4. Highlight and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).

5. Collect complaints, anamnesis of life and diseases, 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 (according to list 4), taking into account the age of the patient.

6. 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 managing physician in the conditions of the health care institution ( according to list 2).

7. Prescribe and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4) of patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).

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

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

12. To assess the general condition of a newborn child by making a reasoned decision according to existing algorithms and standard schemes, observing the relevant ethical and legal norms.

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

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

17. To perform medical manipulations (according to list 5) in the conditions

of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.

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

20. Analyze the epidemiological situation and carry out mass and individual, general and local prevention of infectious diseases.

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

22. Apply modern digital technologies, specialized software, and statistical data analysis methods to solve complex healthcare problems.

24. To organize the necessary level of individual safety (own and the persons one cares about) in case of typical dangerous situations in the individual field of activity.

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

29. Plan, organize and carry out measures for the specific prevention of infectious diseases, including in accordance with the National calendar of preventive vaccinations, both mandatory and recommended. Manage vaccine residues, organize additional vaccination campaigns, including immunoprophylaxis measures.

### **Learning outcomes for the discipline:**

1. Identify different clinical options and complications of the most common childhood infectious diseases;

2. Plan the examination of a sick child and interpret the obtained results for the most common childhood infectious diseases;

3. Carry out differential diagnosis and make a preliminary clinical diagnosis of the most common childhood infectious diseases;

4. Determine the tactics of patient management in the most common infectious diseases of childhood;

5. Demonstrate the ability to maintain medical documentation in the clinic for children's infectious diseases;

6. Diagnose and provide emergency care in the main emergency situations in the children's infectious diseases clinic (shock, coma, allergic reactions, asphyxia).

## **1. INFORMATION SCOPE OF THE EDUCATION**

The study of the discipline is given 1,5 credits ECTS /45 hours.



*If there is a need to structure the discipline into content modules:*

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### **Content module 1. Pediatric respiratory infections**

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#### **Specific goals:**

1. To determine the place of pediatric respiratory infections in the structure of infectious diseases in children.
2. To determine the etiology, features of the epidemiological process, the main phases of the pathogenesis of diseases.
3. Conduct a clinical examination of a sick child, identify symptoms and syndromes that characterize an infectious disease, establish a clinical diagnosis, assess the severity of the disease, the presence of emergencies.
4. Make a survey plan, evaluate the results of the survey.
5. Determine the indications for hospitalization, prescribe treatment.
6. Make a plan of anti-epidemic measures in the center of infection.

#### **Topic 1. Acute respiratory infections (influenza, parainfluenza, COVID-19 whooping cough, diphtheria, infectious mononucleosis)**

Etiology, epidemiology, pathogenesis. Clinical features of various forms of the disease. Complication. Diagnosis. Principles of treatment and prevention.

#### **Topic 2. Measles. Rubella. Varicella. Shingles. Scarlet fever.**

Etiology, epidemiology, pathomorphological features of various forms. Classification, Clinical features of typical and atypical forms of the disease and complications. Diagnosis. Principles of treatment. Specific prevention and anti-epidemic measures in the center of infection.

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### **Content module 2. Infectious diseases of the nervous system**

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#### **Specific goals:**

1. Determine the place of infectious diseases of the nervous system in the structure of infectious diseases in children.
2. To determine the etiology, features of the epidural process, the main phases of the pathogenesis of the disease.
3. Conduct a clinical examination of a sick child, identify symptoms and syndromes that characterize an infectious disease, establish a clinical diagnosis, assess the severity of the disease, the presence of emergency conditions.
4. Draw up an examination plan, evaluate the examination results.
5. Determine indications for hospitalization, prescribe treatment.
6. To draw up a plan of anti-epidemic measures in the focus of infection.

#### **Topic 3. Meningococcal infection. Poliomyelitis. Enterovirus infection.**

Etiology, epidemiology, pathogenesis. Classification. Clinic of various forms. Complication. Diagnosis. Effects. Principles of treatment. Specific prevention and anti-epidemic measures in the center of infection.

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### **Content module 3. Infectious diseases of the gastrointestinal tract and hepatobiliary system in children.**

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#### **Specific objectives of the content module:**

1. To determine the place of acute intestinal infections and viral hepatitis in the structure of infectious diseases in children.
2. To determine the etiology, features of the epidemiological process, the main

phases of the pathogenesis of the disease.

3. Conduct a clinical examination of a sick child, identify symptoms and syndromes that characterize an infectious disease, establish a clinical diagnosis, assess the severity of the disease, the presence of emergencies.

4. Make a survey plan, evaluate the results of the survey.

5. Determine the indications for hospitalization, prescribe treatment.

6. To plan anti-epidemic measures in the center of infection.

**Topic 4. Intestinal infections: shigellosis, salmonellosis, rotavirus infection.**

Etiology, epidemiology, pathogenesis. Classification. Clinical features of typical forms in children of different ages. Complication. Laboratory diagnostics.

Principles of treatment and prevention.

**Viral hepatitis A, B, C, D and others.**

Etiology, epidemiological features, pathogenesis. Classification. Clinic of various forms. Laboratory diagnostics. Principles of treatment and prevention.

**3. The structure of the discipline "Pediatric infectious diseases"**

Topic	Lectures	Practical classes	Self Study	Individual work
<b>Content module 1. Pediatric drip (respiratory) infections</b>				Independent examination of the child, identification of characteristic symptoms and syndromes of infectious diseases, evaluation of laboratory results.
<b>Topic 1.</b> Acute respiratory infections (influenza, parainfluenza, COVID-19, whooping cough, diphtheria, infectious mononucleosis).		4	3	
<b>Topic 2.</b> Measles. Rubella. Varicella. Shingles. Scarlet fever.	2	4	4	
<b>Content module 2. Infectious diseases of the nervous system</b>				Rationale for clinical diagnosis. Appointment of therapy. writing microcracy on the patient. Drawing up a plan of anti-epidemic measures in the center of infection.
<b>Topic 3.</b> Meningococcal infection, polio, enterovirus infection	2	6	3	
<b>Topic 4.</b> Intestinal infections: Shigellosis, salmonellosis, rotavirus infection. Viral hepatitis A, B, C, D and others.		5	4	
<b>Content module 3. Infectious lesions of the gastrointestinal tract (GIT) and hepatobiliary system in children</b>				Compilation of tables for the differential diagnosis of symptoms, individual symptoms, laboratory
<b>Topic 4.</b> Gastrointestinal tract (GIT) infections: Shigellosis, salmonellosis, rotavirus infection. Viral hepatitis A, B, C, D and others..		5	4	

Curation of patients and writing history diseases (individual work).			4	indicators of the disease (rash, plaque, jaundice, defecation, hemogram, cerebrospinal fluid). Lumbar puncture on a mannequin. Preparation of a report for classes on the topic of independent work.
Case report (individual work). Test control (format A) on the topics of classes, situational solutions tasks			4	
<b>Total:</b> credits ECTS – 1,5; hours – 45;	<b>6</b>	17	22	

#### 4. Thematic plan of lectures of the discipline "Pediatric infectious diseases"

№	Topic	hours
1	Infectious diseases with tonsillitis syndrome in children. Diphtheria.	2
2	Infectious diseases with exanthema syndrome in children	2
3	Infectious diseases of the nervous system in children	2
<b>Total</b>		<b>6</b>

#### 5. Thematic plan of practical training of the discipline "Pediatric infectious diseases" (seminar and laboratory classes are not provided by the program)

№ з/п	Topic	hours
1.	Acute respiratory infections (influenza, parainfluenza, COVID-19, pertussis, diphtheria, infectious mononucleosis) Croup syndrome. Etiology, epidemiological features, pathogenesis. Clinical forms. Complication. Diagnosis. Principles of treatment and prevention.	4
2.	Measles. Rubella. Varicella. Shingles. Scarlet fever. Etiology, epidemiology, pathogenesis, clinic of typical forms, complications. Congenital rubella. Principles of treatment. Specific prevention. Anti-epidemic measures in the center of infection.	4
3.	Meningococcal infection. Poliomyelitis. Enterovirus infection. Etiology, epidemiology, pathogenesis. Classification. Clinic of various forms. Complication. Diagnosis. Effects. Principles of treatment. Specific prevention and anti-epidemic measures in the center of infection.	4
4.	Gastrointestinal tract infections: shigellosis, salmonellosis,	5

	rotavirus infection. Etiology, epidemiology, pathogenesis. Classification. Clinic of typical forms in children of different ages. Complication. Laboratory diagnostics. Principles of treatment and prevention. Viral hepatitis A, B, C, D and others. Etiology, epidemiological features, pathogenesis. Classification. Clinic of various forms. Laboratory diagnostics. Principles of treatment and prevention.	
	Curation of patients and writing a medical history (individual independent work).	
	Together current educational activities	17

### 6. Thematic plan of independent work of students

№	Topic	hours	type of control
1.	Differential diagnosis of ARVI in children: adenoviral, respiratory syncytial (RS), rhinovirus infections.	2	Current control in practical classes  The question is worked out independently material are included in the semester control tests
2.	Differential diagnosis of mumps infection in children.	1	
3.	Differential diagnosis of pseudotuberculosis in children	1	
4.	Encephalitis in children	2	
5.	Meningococcal infection in children. Enterovirus infections. Poliomyelitis.	1	
6.	Escherichia coli, yersiniosis in children.	1	
7.	Felinos (bartonellosis). Clinic. Diagnosis. Treatment.	1	
8.	Immunoprophylaxis of infectious diseases.	2	
9.	Helminthiasis in children. Diagnosis. Treatment	1	
10.	HIV / AIDS (pneumocystis, candidiasis, cryptococcal infection)	2	
11.	Curation of patients and writing medical history	4	Discussion of medical history is carried out at the last lesson
12.	Preparation for practical classes	4	
	<b>Total</b>	<b>22</b>	

According to the current regulations on the organization of the educational process, the student's independent work is one of the forms of the organization of training, the main form of mastering the educational material in the free time from the obligatory educational classes on time. Independent work of students of the University is regulated by the "Regulations on the Independent Work of Students of the Danil Halytsky LNMU" of October 24, 20, protocol №4.

## **7. Individual tasks**

### **Individual assignment - case history** (scheduled for the academic year)

Individual research assignment is a form of organization of study at the university, which aims to deepen, summarize and consolidate the knowledge gained by students in the learning process, as well as to apply this knowledge in practice. An individual task at the Department of Pediatric Infectious Diseases involves writing a student's educational history of the disease, performed by students under the guidance of a teacher

The purpose of the individual educational research task - independent study of part of the program material, systematization, deepening, generalization and practical application of the student's knowledge from the educational course, development of skills of independent work. The completed individual assignment has a cover letter, the content of the individual assignment, theoretical and practical component, conclusion, list of used literature. Disclosure of an individual assignment should have practical orientation, communication with a specific object of activity (patient), which is in-patient treatment in one of the children's wards of the regional infectious clinical hospital. The design of the work is carried out in accordance with the guidelines for writing student medical history.

For the student, the medical history is a test work, the design of which shows the ability to work with the patient, examine him, correctly argue the diagnosis, prescribe appropriate treatment for the situation, use special literature.

In the history of the disease it is advisable to present only reliable facts, neat handwriting to draw up all the materials on standard sheets of paper, highlight individual sections, leave margins on both sides of the letter.

## **8. Learning methods**

It is necessary to present the system of organization of classes, use of interactive methods, educational technologies used for transfer and assimilation of knowledge, skills and skills.

In studying the discipline "Pediatric Infectious Diseases" are used varieties of teaching methods recommended for higher education, namely:

- by sources of knowledge: verbal (explanation, lecture, conversation, discussion); visual (demonstration); practical (practical work, mastering practical skills);
- by the logic of the educational process: analytical (determination of the general condition of the patient and the main features of the disease), synthetic (clarification of the relationship of the main features of the disease, determination

of optimal measures for diagnosis, treatment and prevention), their combination - analytically-synthetic, as well as inductive deductive method, their combination is a deductive method;

- by the level of independent mental activity: problematic, partially search, research.

By combining and summarizing the above methods of teaching, it is advisable to introduce such methods of organization of training as:

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

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

The thematic plans of practical classes and Self-study provide for the implementation in the educational process of all topics that are part of the modules.

**Lectures.** During lectures, students develop theoretical basic knowledge, provide a motivational component and a general-oriented stage of mastering scientific knowledge during students' independent work.

#### **Practical classes**

are clinical, aimed at controlling the assimilation of theoretical material and the formation of practical skills, as well as the ability to analyze and apply the acquired knowledge to solve practical problems, are conducted in the children's departments of the clinical bases of the department

- Each class begins with a test test to assess the baseline and determine students' readiness for the class. The teacher defines the purpose of the class and creates a positive cognitive motivation; answers students' questions raised during the VTS on the topic of the lesson.

- The main stage of the lesson is the practical work of the student at the patient's bed. Teachers and students traverse patients. Students examine sick children, collect anamnesis, examine them, perform diagnostic procedures, and the like. Control of the main stage of the class is carried out by assessing the student's practical skills, ability to solve typical situational tasks. The teacher discusses and explains, emphasizes the peculiarities of the disease in a particular child, aims at a more rational conduct of a particular survey method, etc.

#### **In addition, practical classes include:**

- planning of examination of the sick child;
- interpretation of laboratory and instrumental research data;

- differential diagnosis of the most common childhood diseases with typical or complicated course;
- determination of the previous clinical diagnosis;
- definition of therapeutic tactics;
- appointment of medical nutrition;
- providing emergency medical care;
- solving situational problems;
- practicing practical skills on the models and near the bed of the sick child;
- keeping medical records.

The assimilation of the topic is controlled in practical classes according to specific goals: the ability to determine the etiological and pathogenetic factors of infectious diseases of childhood, to classify and analyze a typical clinical picture, to plan a survey and analyze data from laboratory and instrumental examinations during a typical course of disease, to demonstrate and prevention of diseases, to diagnose and determine major urgent conditions, to evaluate the prognosis of the disease, plan sanitary control measures at the source of infection, demonstrate the moral and ethical principles of medical specialist and principles of professional subordination in pediatrics.

The list of criteria for diagnosis and treatment of diseases is governed by the relevant protocols in the specialties of "pediatrics", "infectious diseases in children" and others. Ministry of Health of Ukraine, Decrees of the Ministry of Health of Ukraine "On Improvement of Outpatient Clinic Assistance to Children in Ukraine" (Order of the Ministry of Health of Ukraine No. 434 of 29.11.2002), "On Improvement of Organization of Medical Assistance to Adolescent Children" (Order of the Ministry of Health of Ukraine No. 465 of 12.12.2002) .

Means of control are test tasks, clinical situational tasks; control of practical skills.

- In the final stage of the class, the student is asked to answer situational tasks to assess the topic of mastering the topic. The teacher summarizes the lesson, gives students assignments for independent work, points to the nodal questions of the next topic and offers a list of recommended literature for independent study.

The duration of one practical training of the topic and taking into account the standards of the weekly classroom load is 4.0 academic hours.

## **9. Control methods**

The section should contain a presentation of the content and technology of student knowledge assessment, namely a list of all types of work that the student is obliged to perform during the ongoing, final control, independent work,

individual tasks and criteria for their evaluation. The section indicates:

- Types of control (current and final)
  - Form of final control according to the curriculum (credit, differentiated credit, exam)

**Methods and forms of control** and assessment of students' achievement in the discipline are carried out in accordance with the requirements of the program and Instruction on the evaluation of students' educational activities in the conditions of implementation of the European Credit Transfer System of the educational process approved by the Ministry of Health of Ukraine (letter of the Ministry of Health of Ukraine № 08.01-47 / 10395 dated 15.04.2014 ).

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

#### **Control methods**

*Theoretical knowledge:*

- Writing and computer testing,
- individual interview, interview,
- Written works structured in content.

*Practical skills:*

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

Send feedback

History

Saved

Community

#### **Evaluation criteria**

**Score "excellent"** - is given if the student correctly answered 90-100% of tests of format A (from the database "Step-2"), when the student correctly and completely completed homework; gives accurate and clear answers to the survey without any guiding questions; teaches material without errors and inaccuracies; demonstrates free practical skills (on dummies and / or near the patient's bed), ability to analyze and apply the results obtained during the examination of the patient to solve practical problems, namely: history taking, examination of the child, planning of the examination, interpretation of laboratory and instrumental research data; correctly determines the clinical diagnosis at the typical course of the disease; fully performs differential diagnostics; prescribes proper treatment in full; Demonstrates excellent emergency care skills; maintains medical records correctly; correctly and completely solves a complex situational case (problem).

**The grade of "good"** is given if the student student correctly answered 70-89% of tests of format A (from the database "Step-2"); did some homework with some mistakes; when answering the questions correctly, consistently and systematically, but they are not exhaustive, the student answers the additional questions without significant mistakes; has good practical skills (on dummies and / or near the patient's bed); with some inaccuracies analyze and apply the results



obtained during the examination of the patient to solve practical problems; correctly determines the clinical diagnosis at the typical course of the disease; correctly but not fully performs differential diagnostics; prescribes overall correct treatment, but there may be some minor irregularities that it corrects independently; Demonstrates good emergency care knowledge and skills; solves with some inaccuracies the situational problem associated with the consideration of this clinical case; ; generally maintains proper medical records, but there may be some minor, self-correcting errors; correctly solves a complex situational problem, but there may be some minor irregularities that he corrects on his own.

A **"satisfactory" grade** is given to a student if the student correctly answered 50-69% of A-format tests (from the Step-2 database). Applies to a student if the student homework is not completed in full and with errors; the student demonstrates knowledge of the main content of the lesson with a satisfactory level of understanding; able to solve simplified problems with the help of the following questions; is capable of performing basic practical tasks (on dummies and / or near the patient's bed) only after appropriate comments and assistance of the teacher; with individual errors parses and apply the results obtained to solve practical problems; determines the clinical diagnosis at the typical course of the disease; makes some mistakes during differential diagnostics; appoints generally correct but not complete treatment and / or minor errors; demonstrates satisfactory knowledge and skills in providing first aid; maintains medical records with individual errors; solves situational problems with individual mistakes.

**The grade is “unsatisfactory”** when the student correctly answered only 50% of tests of format A.

The student can work out the missed topics or translate them for a positive evaluation of the teacher during his consultations (individual work with students) no more than 3 times during the study of the module, thereby to score at least the minimum points to be admitted to the final module control.

**10. The current control** is carried out during the training sessions and is aimed at checking the students' learning of the learning material (it is necessary to describe the forms of conducting the current control during the training sessions on a 4-point (national) scale). Forms of assessment of current learning activities should be standardized and include control of theoretical and practical training.

#### *10.1 Evaluation of current learning activities.*

*Ongoing control* is carried out at each practical session according to the specific objectives of the topic. All practical training uses objective control of theoretical training and practical skills (standardized by the method of implementation).

Student answers 10-15 tests (tests on topic of class, format A)

- Answers standardized questions that require knowledge to understand the current topic.
- Demonstrates knowledge and skills of practical skills in accordance with the topic of practical training near the patient's bed
- Solves a situational problem by topic of employment

During the evaluation of the mastery of each topic for the current educational activity, the student is assigned a 4-point (national) grade. At the same time, all types of work provided for by the discipline program are taken into account. The student must receive a grade on each topic for further conversion of grades into points on a multi-point (200-point) scale. At the same time, all types of work provided by the educational program are taken into account. The student must receive a grade in each topic. Assessment forms for current educational activities should be standardized and include control of theoretical and practical training.

Independent work of students, which is provided for in the topic along with the classroom, is evaluated during the current control of the topic in the corresponding lesson.

Individual work in the form of writing a medical history is valued at 5 points.

**11. The form of final control** of academic success (to choose: credit, differentiated credit) is carried out upon completion of studying the block of relevant topics in the last lesson in the form of differential credit.

Semester differentiated credit is a form of final control, which consists in the assessment of the student's learning of the educational material on the basis of current control and completed individual test tasks in the last lesson.

A student is considered to be admitted to the semester examination in a discipline, if he has attended all the prescribed curriculum for the discipline of classroom training, completed all types of work provided by the work program of this discipline and in its study during the semester scored less than 72 points.

The examination form is standardized and includes control of theoretical and practical training. The maximum number of points that a student can score in the examination is 80. The minimum number of points in the examination - at least 50.

The differential credit lasts 2 academic hours and is carried out according to the following rules.

**Stage 1** - Test control - 30 test tasks, carried out for 30 min.

The maximum score is 30 (1 point for 1 correct answer). The minimum criterion for successful completion of the test control is the result of 50% correct answers (15 tests).

**Stage 2** - Solving a complex situational problem, including determining the previous clinical diagnosis, interpretation of laboratory and instrumental research data, determining therapeutic tactics, prescribing treatment. Carried out for 30 minutes The maximum score is 25 for one task.

**Stage 3** - interpretation of laboratory data (general, biochemical,

serological blood tests, analysis of cerebrospinal fluid, urine, coprogram, immunological markers for the diagnosis of infectious diseases) - 10 minutes are spent. The maximum score is 5.

**Stage 4** - 4 short descriptive theoretical questions on the topic of the program - 30 minutes. The maximum score is 20.

The time frame of the online exam is set: access time - 12 minutes, duration of the exam test - 90 minutes. The department has developed and approved a sufficient number of examination test tasks of different levels of complexity. 40 tasks with one correct answer and 40 tasks of extended choice are submitted for differentiated credit. Extended selection tasks provide 50% of the correct answers from the total number of distractors. Pre-examination consultations and educational testing are held for students. Evaluation of online testing is performed automatically with subsequent export, visualization and analysis of results in Excel. Grades from the discipline are exhibited and information in accordance with the requirements.

**12. The scheme of calculation and distribution of points received by students:**

*For disciplines, the form of final control is the examination (differential test):*

***The maximum number of points*** that a student can earn for his / her current study activities for admission to the examination (differential test) is 120 points.

***The minimum number of points*** that a student must earn for his / her current study activities for admission to the examination (differential test) is 72 points.

***Calculation of the number of points*** is made on the basis of the student's scores on the 4-point (national) scale during the study of the discipline, by calculating the arithmetic mean (AM). The

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

rounded to two decimal places. The resulting value is converted to scores on a multicolor scale as follows:

For convenience, the table is calculated on a 200-point scale:

**Recalculation of the average grade for current activity into a multi-scale scale for examinations completed**

4-point scale	200-point scale
5	120
4.95	119
4.91	118
4.87	117
4.83	116
4.79	115
4.75	114
4.7	113
4.66	112
4.62	111
4.58	110
4.54	109
4.5	108

4-point scale	200-point scale
4.45	107
4.41	106
4.37	105
4.33	104
4.29	103
4.25	102
4.2	101
4.16	100
4.12	99
4.08	98
4.04	97
3.99	96
3.95	95

4-point scale	200-point scale
3.91	94
3.87	93
3.83	92
3.79	91
3.74	90
3.7	89
3.66	88
3.62	87
3.58	86
3.54	85
3.49	84
3.45	83
3.41	82

4-point scale	200-point scale
3.37	81
3.33	80
3.29	79
3.25	78
3.2	77
3.16	76
3.12	75
3.08	74
3.04	73
3	72
Less 3	Not enough

*Independent work of students* is evaluated during the current control of the topic in the relevant lesson. The assimilation of topics that are presented only for independent work is controlled at the final control.

**Assessment from a discipline that completes a differentiated test** is defined as the sum of points for current educational activity (at least 72) and points for completing individual test tasks in the last lesson (at least 50).

### POINTS DISTRIBUTION

that are assigned to students when evaluating current learning activities

Total points for current educational activity *	The maximum rating is 120 The minimum rating is 70
Differential credit	The maximum rating – 80 It is considered enrolled – 50 – 50

\* A student may receive a maximum of 120 points for their current academic activities. This score is calculated by multiplying the number of points corresponding to the grade of "excellent" by the number of topics in the module with the addition of points for individual work.

The minimum number of points required to be admitted to the final module control is calculated by multiplying the number of points that are "satisfactorily" by the number of topics.

The maximum number of points awarded to students in mastering the subject (credit credit) is 200, including 120 points (60%) for their current educational

activity, and 80 points (40%) for the results of the differential credit. The semester grade is defined as the sum of the assessments of the current educational activity (in points) and the assessment of the differential test (in points), which is exposed when assessing theoretical knowledge and practical skills according to the lists determined by the discipline program.

The points from the course are independently converted to both the ECTS scale and the 4-point (national) scale. ECTS points are not converted to the 4-point scale and vice versa.

The points of students studying in one specialty, based on the number of points earned from the discipline, are ranked on the ECTS scale as follows:

Rating ECTS	Statistics
A	Top 10% of students
B	The next 25% are students
C	The next 30% are students
D	The next 25% are students
E	The last 10% of students

Ranking with assignment of grades "A", "B", "C", "D", "E" is made for students of this course, who study in one specialty and have successfully completed the study of the discipline. Students who have received FX, F ("2") grades are not included in the ranked student list. Students with an FX score automatically receive an "E" grade upon transfer.

Discipline points for students who have successfully completed the program are converted to the traditional 4-point scale by the absolute criteria given in the table below:

Score from discipline	Score on a 4-point scale
From 170 to 200 points	5
From 140 to 169 points	4
From 139 points to the minimum number of points that a student must score	3
Below the minimum number of points that a student must score	2

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

The objectivity of the evaluation of students' educational activity is checked

by statistical methods (correlation coefficient between ECTS and national scale scores).

**13. Methodical provision** (educational content (synopsis or extended lecture plan), practical plans (seminars, assignments for laboratory work, independent work, questions, tasks or cases for current and final control of students' knowledge and skills, complex control work, post-certification monitoring of acquired knowledge and skills in the discipline).

Methodological support is provided by all kinds of educational activities: lectures, practical classes, independent work of students.

Methodical provision of the lecture course:

1. Lectures.
2. Methodical development of lectures.
3. Presentation of lectures.
4. Lecture videos and motion pictures.

*Methodical provision of practical classes:*

1. Methodical development of practical classes for teachers.
2. Guidelines for practical classes for students.
3. Variants of test questions and tasks to check the baseline knowledge on each topic.
4. Variants of situational tasks for checking the assimilation of topics.
5. Variants of tasks (theoretical and practical) for final control.
6. Instructions for working with phantoms and models to practice practical skills.

*Methodical support of students' independent work:*

1. Guidelines for pre-classroom preparation for practical classes.
2. Workbook for pre-classroom training.
3. Methodical instructions for the implementation of practical skills.
4. Tasks for students to work independently.

The following tools are used to diagnose learning success:

1. Test tasks of format A
2. Practical tasks to test the acquisition of practical skills
3. Situational tasks.

The development of test-control questions, structured situational tasks, and practical tasks used to diagnose academic success should be based on a list of questions and practical skills that a student must acquire when studying in accordance with the discipline "Pediatric Infectious Diseases." The sets of practical tasks are formed from the list of practical skills that the student should acquire

during the study of the discipline, which are standardized by the method of practical work.

#### **14. Recommended Books**

##### Basic

1. Principles and Practice of Pediatric Infectious Diseases / Sarah S. Long, Larry K. Pickering, Charles G. Prober.; Editor: Sarah S. Long, MD. – Third Edition. – Churchill Livingstone elsevier. – 2008. – 1618 p.
2. Pediatric Infectious Diseases / Edted by Prof. S.O. Kramarev and Prof. O. B. Nadraga. – second edition, corrected. – Kyiv AUS Medicine Publishing.- 2015. – 240 p.
3. Red Book Atlas of Pediatric Infectious Diseases / Edited by American Academy of Pediatrics Edited by Carol J. Baker, MD, FAAP. – 4-th edition, 989 p.
4. Nelson textbook of pediatrics / Elsevier, Volume 2, 21st edition. – 4264 p.

#### **15. Information resources**

4. WHO.Vaccine Position Papers. -  
<https://www.who.int/immunization/documents/positionpapers/en/>
5. <https://aidsinfo.nih.gov/understanding-hiv-aids/fact-sheets/21/57/hiv-and-immunizations>
6. <https://www.cdc.gov/vaccines/adults/rec-vac/health-conditions/hiv.html>
7. <https://www.cdc.gov/vaccines/vac-gen/imz-basics.htm>
8. <https://medlineplus.gov/immunization.html>