

**MINISTRY OF HEALTH OF UKRAINE**  
**ODESSA NATIONAL MEDICAL UNIVERSITY**

Department of Pediatrics №1



I APPROVE

Acting vice-rector for scientific and pedagogical  
work

Svitlana KOTIUZHYNKA

" 01 " 09 2022

**EDUCATIONAL PROGRAM ELECTIVE DISCIPLINE**

**"Algorithm for establishing a pediatric diagnosis of complex clinical cases in family medicine"**

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

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

**Specialty:** 222 "Medicine"

**Educational and professional program:** "Medicine"

The working program is compiled on the basis of the educational and professional program "Medicine", the training of specialists of the second (master's) level of higher education in the specialty 222 "Medicine" of the field of knowledge 22 "Health care", approved by the Academic Council of ONMedU, dated Jun 23, 2022, protocol No. 9.

Developers: head of the department, Corresponding Member of NAMS of Ukraine, DSc, Prof. Aryaev M.L., head teacher of the department, PhD, assoc. of professor Kaplina L. E., assoc. of proessor, PhD Y.V. Desyatska., assistant Byshley N.A.

The working program was approved at the meeting of the Department of Pediatrics No. 1

Protocol No. 21 dated June 29, 2022

Head of the department, Corresponding Member of NAMS of Ukraine,

DSc, Prof.

Mykola ARYAYEV

Agreed with the guarantor of the EPP

(signature)

(Valeria MARICHEREDA)  
(Name SURNAME)

The program was approved at the meeting of the subject cycle commission for pediatric disciplines of ONMedU

Protocol No. 6 dated "30" 06 2022\_y.

Head of the subject cycle methodical commission for pediatric disciplines, professor

(signature)

(Natalia KOTOVA)

(Name SURNAME)

Reviewed and approved at the meeting of the Department of Pediatrics No. 1

Protocol No.     dated "   "     20    y.

Head of the department (Mykola ARYAYEV)

(signature)

(Name SURNAME)

Reviewed and approved at the meeting of the Department of Pediatrics No. 1

Protocol No.     dated "   "     20    y.

Head of the department (Mykola ARYAYEV)

(signature)

(Name SURNAME)

### 1. Description of optional educational discipline:

2. Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the academic discipline
The total number of:  Credits: 1.5  Hours: 45  Content modules: 1	Branch of knowledge 22 "Health care"	<i>Full-time education</i> <i>Elective discipline</i>
	Specialty 222 "Medicine"	<i>Year of training: 6</i>
		<i>Semester XI - XII</i>
		<i>Lectures (0 hours)</i>
	Specialization doctor	<i>Seminars (16 hours)</i>
		<i>Practical (0 hours)</i>
		<i>Laboratory (0 hours)</i>
	Level of higher education second (master's)	<i>Independent work (29 hours)</i>
		<i>including individual tasks (0 hours)</i>
		<i>Final control form (according to the curriculum) - credit.</i>

### 2. The purpose and tasks of the optional educational discipline

**Goal:** Acquisition of knowledge and formation of elements of professional competences and

**Task:**

- 1
2. Improving the skills of substantiating a clinical diagnosis, drawing up a plan for laboratory
- 3

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

**General competencies (GC):**

- GC 1 – Ability to abstract thinking, analysis and synthesis.
- GC 2 - Ability to learn and master modern knowledge.
- GC 3 – Ability to apply knowledge in practical situations.
- GC 4 - Knowledge and understanding of the subject area and understanding of professional activity.
- GC 5 – Ability to adapt and act in a new situation.
- GC 6 – Ability to make informed decisions.
- GC 7 – Ability to work in a team.
- GC 8 – Ability to interpersonal interaction.
- GC 10 - Ability to use information and communication technologies
- GC 11 - Ability to search, process and analyze information from various sources.
- GC 12 – Determination and perseverance regarding the assigned tasks and assumed responsibilities.
- GC 13 – Awareness of equal opportunities and gender issues.

- GC14 – Ability to realize one's rights and responsibilities as a member of society, to realize the values of public (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.
- GC15 – Ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies, use different types and forms motor activity for active recreation and leading a healthy lifestyle.
- GC17 – Desire to preserve the environment.

### **Special competencies (SC):**

- SC 1 – Ability to collect medical information about the patient and analyze clinical data.
- SC 2 - Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.
- SC 3 – Ability to establish a preliminary and clinical diagnosis of the disease.
- SC 5 – Ability to determine the nature of nutrition in the treatment and prevention of diseases.
- SC 6 –Ability to determine the principles and nature of treatment and prevention of diseases.
- SC 7 - Ability to diagnose emergency conditions
- SC 8 –Ability to determine tactics and provide emergency medical care.
- SC 10 – Ability to perform medical manipulations.
- SC11 – Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility.
- SC 13 –Ability to carry out sanitary and hygienic and preventive measures.
- SC 16 – Ability to fill medical documentation, including electronic forms.
- SC17 – Ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population.
- SC21 – Ability to clearly and unambiguously 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.
- SC24 –Adherence to ethical principles when working with patients and laboratory animals.
- SK26 –Ability to determine the management tactics of persons subject to dispensary supervision.

### **Program learning outcomes (PLO):**

- PLO1 – Having a thorough knowledge of the structure of professional activity. Being 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.
- PLO2 – Understanding and knowledge of basic and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.
- PLO3 – . Specialized conceptual knowledge that includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.
- PLO4 – Identifying 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)..

- PLO5 – Collecting complaints, history of life and diseases, assessing 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, evaluation of the information regarding the diagnosis (according to list 4), taking into account the age of the patient..
- PLO6 – Establishing 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 the list 2).
- PLO7 – . Assigning and analyzing 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).
- PLO8 – Determination of the main clinical syndrome or symptom that determines the severity of the victim's/victim's condition (according to list 3) by making a reasoned decision about the person's condition under any circumstances (in the conditions of a health care facility, outside its borders), including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.
- PLO9 – Determination of the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the patient's age, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, based on 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.
- PLO10 – Determination of 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.
- PLO12 – Assessment of 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.
- PLO13 – Assessment and monitoring of the child's physical and psychomotor development, provision of recommendations on feeding and nutritional features depending on age, and organization of preventive vaccinations according to the calendar.
- PLO14 – Determination of tactics and providing emergency medical care in emergencies (according to list 3) in limited time conditions according to existing clinical protocols and standards of treatment.
- PLO17 – Performing medical manipulations (according to list 5) in the conditions of a medical institution, at home or 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.
- PLO21 – Searching for the necessary information in the professional literature and databases of other sources, analysing, evaluating and application of this information.
- PLO25 – Conveying one's knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists clearly and unambiguously.
- PLO27 – Communication freely in the state language and English, both orally and in writing to discuss professional activities, research and projects.
- PLO30 – Determination of the management tactics of persons subject to dispensary supervision (children, pregnant women, workers whose professions require mandatory dispensary examination)

**As a result of studying the academic discipline, the application's acquisition of the higher education must:**

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**Be able to:**

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Conduct clinical examination of children of different ages according to standard methods.

Analyze the results of laboratory, functional and instrumental research.

Carry out differential diagnosis and substantiate the clinical diagnosis.

Determine the tactics and provide emergency medical care in emergency situations in children.

Determine the nature and principles of treatment of sick children on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.

Perform medical manipulations (according to list 5) for common diseases in children.

Keep medical records for common diseases in children.

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### 3. Content of the optional academic discipline

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#### Content module 1.

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Mastering the communication skills of interviewing parents about the probability of a diagnosis of bronchial asthma in a child. Mastering the communication skills of interviewing parents of a child with chronic cough.

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

Mastering the communication skills of interviewing parents about the probability of a diagnosis of bronchial asthma in a child. Mastering the communication skills of interviewing parents of a child with chronic cough.

Role games. Mastering the communication skills of interviewing parents about the probability of a diagnosis of bronchial asthma in a child. Mastering the communication skills of interviewing parents of a child with chronic cough.

Communicative skills of communicating with the mother of a newborn child with manifestations of dundice according to the Algorithm of Integrated Management of Childhood Illnesses.

<b>Content module 1. "Algorithm for establishing a pediatric diagnosis of complex clinical cases in family medicine."</b>						
<b>T</b>	6	0	2	0	0	4
<b>T</b>	6	0	2	0	0	4
<b>T</b>	6	0	2	0	0	4
<b>T</b>	6	0	2	0	0	4
<b>T</b>	6	0	2	0	0	4
<b>T</b>	6	0	2	0	0	4
<b>T</b>	5	0	2	0	0	3
<b>T</b>	2	0	2	0	0	2
<i>Together according to content module 1</i>	45	0	16	0	0	29
<i>Individual tasks</i>	0	0	0	0	0	0
<b>Total hours</b>	45	0	16	0	0	29

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

**5.1. Topics of lectures** - not provided for.

**5.2. Topics of seminar classes.**

No	Topic	How many hours
1.	<b>T</b>	2
2	<b>T</b>	2
3	<b>T</b>	2
4	<b>T</b>	2
5	<b>T</b>	2
6	<b>T</b>	2
7	<b>T</b>	2
8	<b>T</b>	2
	In total	16

**5.3. Topics of practical classes** - not provided for.

## **6. Self - make work of a applicant of higher education**

No	Types of self - make work	Number of hours
1	P	4
2	P	4
3	P	4
4	P	4
5	P	4
6	P	4
7	P	3
8	P	2
	In total	29

## 7. Teaching methods

**Seminar classes:** discussion of theoretical issues, face-to-face survey on basic terminology, testing,

## 8. Forms of control and evaluation methods (including criteria for evaluating learning outcomes)

**Current control:** assessment of mastery of practical communication skills with a sick child and his

**Final control:** test

### *The structure of the current assessment at the seminar session*

- Evaluation of compliance with the communication algorithm during the role-playing game; the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.
- Assessment of the purpose of additional examination methods and their interpretation maximum score – 5, minimum score – 3, unsatisfactory score – 2;
- Assessment of the justification of the preliminary or clinical diagnosis and determination of patient management tactics.
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.

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

### **Current assessment criteria for the seminar session:**

Excellent "5"	The applicant is fluent in the material, takes an active part in the role play, discussing and solving the situational clinical problem, confidently demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data, expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Good "4"	The applicant has a good command of the material, participates in a role-play, discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
Satisfactorily "3"	The applicant does not have enough knowledge of the material, is unsure of participating in a role play, discussing and solving a situational clinical problem, demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data with significant errors.
Unsatisfactorily "2"	The applicant does not master the material, does not take part in a role-play, discussion and solution of a situational clinical problem, does not demonstrate practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data.

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

The applicant for higher education is credited with optional discipline, provided that there is no academic debt and an average current grade of at least 3.0.

## 10. Methodological support:

- The educational program of a selective academic discipline
- Syllabus of selective educational discipline
- Textbooks: Nelson Textbook of Pediatrics / Edition 2 volume set. Edition: 21st, 2019
- Multimedia presentations
- Test tasks
- Methodical development of seminar classes

## 11. Recommended literature

### **Basic:**

1. Nelson Textbook of Pediatrics / Edition 2 volume set. Edition: 21st, 2019.
2. Avery's Diseases of the Newborn Book Tenth Edition •2018. Copyright ©  
No of pages 1656  
<https://www.sciencedirect.com/book/9781437701340/averys-diseases-of-the-newborn>
3. Vinod K Paul, Arvind Bagga. Ghai Essential Pediatrics, 8th edition, 2013. PDF format.

### **Additional:**

1. Chang AB, Marchant JM Approach to chronic cough in children. -Literature review:Nov 18, 2020. – UpToDate: [https://www.uptodate.com/contents/approach-to-chronic-cough-in-children?search=chronic%20cough%20in%20children&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/approach-to-chronic-cough-in-children?search=chronic%20cough%20in%20children&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1)
2. O'Brien S.Approach to the child with bleeding symptoms:Literature review. - UpToDate:Sep 19, 2019. - [https://www.uptodate.com/contents/approach-to-the-child-with-bleeding-symptoms?search=Approach%20to%20the%20child%20with%20bleeding%20symptoms&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/approach-to-the-child-with-bleeding-symptoms?search=Approach%20to%20the%20child%20with%20bleeding%20symptoms&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1)
3. Global Initiative for Asthma – GINA, перегляд 2019 <https://ginasthma.org/wp-content/uploads/2019/06/GINA-2019-main-report-June-2019-wms.pdf>
4. Aryayev M, Senkivska L and Lowe JB (2021) Psycho-Emotional and Behavioral Problems in Children With Growth Hormone Deficiency. Front. Pediatr. 9:707648. doi: 10.3389/fped.2021.707648

## 12. Electronic information resources

1. <https://www.pediatrics.od.ua/>
2. <http://moz.gov.ua> – Ministry of Health of Ukraine
3. [www.ama-assn.org](http://www.ama-assn.org) - American Medical Association / American Medical Association
4. [www.oapn.od.ua](http://www.oapn.od.ua) - NGO "Odesa Association of Pediatricians and Neonatologists"
5. [www.who.int](http://www.who.int) - World Health Organization
6. [www.dec.gov.ua/mtd/home/](http://www.dec.gov.ua/mtd/home/) - State Expert Center of the Ministry of Health of Ukraine
7. <http://bma.org.uk> - British Medical Association
8. [www.gmc-uk.org](http://www.gmc-uk.org) - *General Medical Council* ( GMC )
9. [www.bundesaerztekammer.de](http://www.bundesaerztekammer.de) – German Medical Association
10. [https://www.who.int/workforcealliance/members\\_partners/member\\_list/ipa/en/](https://www.who.int/workforcealliance/members_partners/member_list/ipa/en/) - International Pediatric Association (IPA)

**11.** <http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/>