

MINISTRY OF HEALTH OF UKRAINE

ODESSA NATIONAL MEDICAL UNIVERSITY

Department of infectious diseases with a course of dermatovenereology

APPROVED

Vice-Rector for Scientific and Pedagogical Work

Eduard BURYACHKIVSKYI

September 1, 2025



**WORK PROGRAM OF THE ACADEMIC DISCIPLINE
IMMUNOPROPHYLAXIS**

Level of higher education: second (master's)

Field of knowledge: 22 'Health Care'

Speciality: 222 'Medicine'

Educational and professional programme: Medicine

2025

The work programme is based on the educational and professional programme 'Medicine' for training specialists of the second (master's) level of higher education in the specialty 222 "Medicine" in the field of knowledge 22 'Health Care', approved by the Academic Council of ONMedU (Minutes No. 10 of 27 June 2024) and the educational and professional programme 'Medicine' for training specialists of the second (master's) level of higher education in the specialty I 2 "Medicine" in the field of knowledge I 'Health Care and Social Security', approved by the Academic Council of ONMedU (Minutes No. 10 of 26 June 2025).

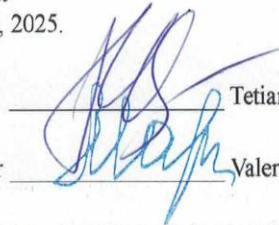
Developer:

Head of the Department, MD, professor Chaban T.V.

The work programme was approved at a meeting of the department of infectious diseases with a course of dermatovenereology.

Minutes No. 1 dated August 29, 2025.

Head of the department



Tetiana CHABAN

Agreed with the EPP Guarantor

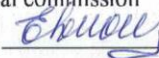


Valeriia MARICHEREDA

Approved by the subject cycle methodical commission on therapeutic disciplines of ONMedU
Minutes No. 1 dated 08/29/2025.

Chairman of the subject cycle methodical commission

for therapeutic disciplines of ONMedU



Olena VOLOSHYNA

Reviewed and approved at the meeting of the department

Minutes No. ___ dated "___" ___ 20__

Head of Department

(signature) (Name SURNAME)

Reviewed and approved at the meeting of the department

Minutes No. ___ dated "___" ___ 20__

Head of Department

(signature) (Name SURNAME)

1. Description of the discipline:

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the discipline
Total number:	Field of knowledge 22 «Health care»	<i>Full-time (day) education</i>
Credits of ECTS: 3		<i>Compulsory discipline</i>
Hours: 90	Specialty 222 «Medicine»	<i>Course: 6</i>
		<i>Semester XI - XII</i>
		<i>Lectures (0 hours)</i>
		<i>Seminars (0 hours)</i>
	Level of higher education second (master's degree)	<i>Practical classes (48 hours)</i>
		<i>Laboratories (0 hours)</i>
		<i>Independent work (42 hours)</i>
		<i>Form of final control – Credit test</i>

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

The purpose is Mastery by the student of higher education of knowledge and formation of elements of professional competences in the field of children's infectious diseases, and improvement of skills and competences acquired during the study of previous disciplines.

The tasks of the discipline are the following

1. Formation of skills and abilities in diagnosis, differential diagnosis of the most common infectious diseases in children, syndromes that occur with these diseases and emergency conditions that may arise during the disease.
2. Improving the skills of substantiating and establishing a clinical diagnosis according to the classification of diseases, drawing up a plan for additional laboratory and instrumental examination.
3. Mastering the ability to determine treatment tactics, providing emergency care and prevention of the most common infectious diseases in children.

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

- *General competencies:*

GC1. Ability to abstract thinking, analysis and synthesis.

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 reasonable 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

GC12 Determination and persistence in relation to assigned tasks and assumed responsibilities GC14

The ability to realize one's rights and responsibilities as a member of society, to be aware of the

values of a 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 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 technologies, to use various types and forms of motor activity for active recreation and leading a healthy lifestyle

GC16 Ability to evaluate and ensure the quality of performed works

GC 17. Ability to evaluate and ensure the quality of the work performed.

- *Special competencies are:*

SC1. Skills of communication and clinical examination of a patient with an infectious disease.

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

SC 3. Ability to establish a preliminary and clinical diagnosis of an infectious disease.

SC4 The ability to determine the necessary work and rest regime in the treatment and prevention of diseases

SC 5. Ability to determine the nature of nutrition in the treatment and prevention of infectious diseases.

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

SC 7. Ability to diagnose emergency conditions in infectious diseases

SC 8. Ability to determine tactics and provide emergency medical care for infectious diseases

SC 10. Ability to perform medical manipulations

SC 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

SC13 Ability to carry out sanitary , hygienic and preventive measures

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

SC15 The ability to conduct a work capacity examination

SC 16. Ability to assess and ensure the quality of work performed

SC17 The ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population

SC20 The ability to conduct epidemiological and medical statistical studies of population health; processing of social, economic and medical information

SC23 The ability to develop and implement scientific and applied projects in the field of health care

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

SC 25. Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results

SC 26. The ability to determine the management tactics of persons subject to dispensary supervision.

- *Program learning outcomes are:*

PLO 1. 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.

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

PLO3 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 related interdisciplinary problems.

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

PLO 5. Collect complaints, anamnesis of life and diseases, evaluate the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information about the diagnosis (according to list 4), taking into account the age of the patient.

PLO 6. Establish a 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 a health care institution (according to list 2).

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

PLO 8. Determine the main clinical syndrome or symptom that determines the severity of the victim/injured'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 boundaries), including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.

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

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

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

PLO16 Form rational medical routes for patients; organize interaction with colleagues in their own and other institutions, organizations and institutions; to apply tools for the promotion of medical services in the market, based on the analysis of the needs of the population, in the conditions of the functioning of the health care institution, its division, in a competitive environment.

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

PLO18 Determine the state of functioning and limitations of a person's life activity and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a

health care institution, based on data about the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents.

PLO19 Plan and implement a system of anti-epidemic and preventive measures regarding the occurrence and spread of diseases among the population.

PLO20 To analyze the epidemiological situation and carry out mass and individual, general and local prevention of infectious diseases.

PLO 21. Searching for the necessary information in the professional literature and databases of other sources, analysing, evaluating and application of this information.

PLO24 To organize the necessary level of individual safety (own and the persons they care about) in case of typical dangerous situations in the individual field of activity.

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

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

PLO31 Determine the management tactics of persons suffering from chronic infectious diseases subject to dispensary supervision

As a result of studying the discipline, the student has to

Know: Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention of common diseases in children of different ages. **Be able:**

- Communicate with the child and his parents, collect complaints, life and disease history, vaccination status.
- Conduct clinical examination of children of different ages according to standard methods.
- Analyze the results of laboratory, functional and instrumental studies.
- Carry out differential diagnosis and substantiate the clinical diagnosis.
- Diagnose, determine tactics and provide emergency medical care in emergency situations in children with infectious pathology.
- Determine the character and principles of treatment of sick children on the basis of a preliminary clinical diagnosis, observing 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 infectious diseases in children.
- Maintain medical documentation for common infectious diseases in children.
- Draw up a vaccination schedule for children of the first year of life and other age groups, taking into account indications and contraindications.

3. The content of the educational discipline

Topic 1. The concept of immunoprophylaxis

Topic 2. The epidemiological situation with vaccine-preventable infections in the world and Ukraine.

Topic 3. WHO immunization strategy

Topic 4. Regulatory framework and organization of vaccine prophylaxis in Ukraine. Preventive vaccination calendar

- Topic 5. Socio-economic and medical-biological foundations of infectious disease prevention
- Topic 6. Preparations used for immunoprophylaxis of infectious diseases. Vaccines, their types, advantages and disadvantages
- Topic 7. Preparations used for immunoprophylaxis of infectious diseases. Anatoxins
- Topic 8. Immune sera and immunoglobulins
- Topic 9. Immunomodulators
- Topic 10. Equipment for premises for preventive vaccinations
- Topic 11. Transportation and storage conditions for vaccines and anatoxins. 'Cold chain'. Shake test
- Topic 12. Ensuring injection safety
- Topic 13. Organisation of preventive vaccinations in a healthcare facility
- Topic 14. Disposal of used equipment (syringes, needles, etc.)
- Topic 15. Conducting an immunisation session
- Topic 17. Indications and contraindications for vaccination
- Topic 18. Post-vaccination reactions and complications
- Topic 19. Features of vaccination in endemic and enzootic areas
- Topic 20. Vaccination for epidemic indications
- Topic 21. Immunoprophylaxis of diphtheria and pertussis
- Topic 22. Immunoprophylaxis of measles, mumps, rubella. WHO global strategy
- Topic 23. Immunoprophylaxis of influenza. Vaccination of risk groups
- Topic 24. Immunoprophylaxis for injuries
- Topic 25. Immunoprophylaxis for Hib infection. Safety of PCV vaccination
- Topic 26. Immunoprophylaxis for meningococcal infection
- Topic 27. Immunoprophylaxis for papillomavirus infection
- Topic 28. Immunoprophylaxis of coronavirus infection
- Topic 29. Immunoprophylaxis of viral hepatitis (hepatitis A, hepatitis B), immune response
- Topic 30. Immunoprophylaxis of intestinal infections
- Topic 31. Immunoprophylaxis of zoonotic infections (tularemia, brucellosis, anthrax, plague)
- Topic 32. Immunoprophylaxis of rabies. Therapeutic and prophylactic immunisation
- Topic 33. Immunoprophylaxis of tick-borne encephalitis
- Topic 34. Immunoprophylaxis of yellow fever
- Topic 35. Immunoprophylaxis of tuberculosis
- Topic 36. Immunoprophylaxis of poliomyelitis
- Topic 37. Support for immunoprophylaxis in society
- Topic 38. Overcoming vaccination 'myths'

4. The structure of the educational discipline

Topic	Number of hours					
	Total	including				
		lectures	laboratories	practical classes	seminars	independent classes work
Topic 1. The concept of immunoprophylaxis	2			2		
Topic 2. The epidemiological situation with vaccine-preventable	2			2		

infections in the world and Ukraine.						
Topic 3. WHO immunization strategy	2			2		2
Topic 4. Regulatory framework and organization of vaccine prophylaxis in Ukraine. Preventive vaccination calendar	2					2
Topic 5. Socio-economic and medical-biological foundations of infectious disease prevention	2					
Topic 6. Preparations used for immunoprophylaxis of infectious diseases. Vaccines, their types, advantages and disadvantages	2			2		
Topic 7. Preparations used for immunoprophylaxis of infectious diseases. Anatoxins	2			2		2
Topic 8. Immune sera and immunoglobulins	2					2
Topic 9. Immunomodulators	2					2
Topic 10. Equipment for premises for preventive vaccinations	4					2
Topic 11. Transportation and storage conditions for vaccines and anatoxins. 'Cold chain'. Shake test	4			2		2
Topic 12. Ensuring injection safety	2			2		2
Topic 13. Organisation of preventive vaccinations in a healthcare facility	2					
Topic 14. Disposal of used equipment (syringes, needles, etc.)	2			2		2
Topic 15. Conducting an immunisation session	2					
Topic 17. Indications and contraindications for vaccination	2			2		
Topic 18. Post-vaccination reactions and complications	4			2		2
Topic 19. Features of vaccination in endemic and enzootic areas	2			2		2

Topic 20. Vaccination for epidemic indications	2					2
Topic 21. Immunoprophylaxis of diphtheria and pertussis	2					
Topic 22. Immunoprophylaxis of measles, mumps, rubella. WHO global strategy	2			2		
Topic 23. Immunoprophylaxis of influenza. Vaccination of risk groups	2			2		
Topic 24. Immunoprophylaxis for injuries	2			2		
Topic 25. Immunoprophylaxis for Hib infection. Safety of PCV vaccination	2			2		2
Topic 26. Immunoprophylaxis for meningococcal infection	2					2
Topic 27. Immunoprophylaxis for papillomavirus infection	4					2
Topic 28. Immunoprophylaxis of coronavirus infection	2			2		2
Topic 29. Immunoprophylaxis of viral hepatitis (hepatitis A, hepatitis B), immune response	2					
Topic 30. Immunoprophylaxis of intestinal infections	2			2		
Topic 31. Immunoprophylaxis of zoonotic infections (tularemia, brucellosis, anthrax, plague)	2			2		2
Topic 32. Immunoprophylaxis of rabies. Therapeutic and prophylactic immunisation	2					
Topic 33. Immunoprophylaxis of tick-borne encephalitis	2			2		2
Topic 34. Immunoprophylaxis of yellow fever	2					

Topic 35. Immunoprophylaxis of tuberculosis	2			2		
Topic 36. Immunoprophylaxis of poliomyelitis	2			2		
Topic 37. Support for immunoprophylaxis in society	4			2		2
Topic 38. Overcoming vaccination 'myths'	2			2		2
Credit test	2			2		
Total	90			48		42

5. Topics of lectures / seminars / practical classes / laboratories

5.1. Topics of lectures

Lectures are not provided.

5.2. Topics of seminars

Seminars are not provided.

5.3. Topics of practical classes

No.	Topic	Hours
1	Topic 1. The concept of immunoprophylaxis	2
2	Topic 2. The epidemiological situation with vaccine-preventable infections in the world and Ukraine.	2
3	Topic 3. WHO immunization strategy	2
4	Topic 6. Preparations used for immunoprophylaxis of infectious diseases. Vaccines, their types, advantages and disadvantages	2
5	Topic 7. Preparations used for immunoprophylaxis of infectious diseases. Anatoxins	2
6	Topic 11. Transportation and storage conditions for vaccines and toxoids. 'Cold chain'. Shake test	2
7	Topic 14. Disposal of used equipment (syringes, needles, etc.)	2
8	Topic 16. Monitoring and observation	2
9	Topic 17. Indications and contraindications for vaccination	2
10	Topic 18. Post-vaccination reactions and complications	2
11	Topic 21. Immunoprophylaxis of diphtheria and whooping cough	2
12	Topic 22. Immunoprophylaxis of measles, mumps, rubella. WHO global strategy	2
13	Topic 23. Immunoprophylaxis of influenza. Vaccination of risk groups	2
14	Topic 24. Immunoprophylaxis in case of injuries	2
15	Topic 25. Immunoprophylaxis of Hib infection. Safety of PCV vaccination	2
16	Topic 27. Immunoprophylaxis of papillomavirus infection	2
17	Topic 29. Immunoprophylaxis of viral hepatitis (hepatitis A, hepatitis B), immune response	2
18	Topic 30. Immunoprophylaxis of intestinal infections	2

19	Topic 32. Immunoprophylaxis of rabies. Therapeutic and prophylactic immunisation	2
20	Topic 34. Immunoprophylaxis of yellow fever	2
21	Topic 35. Immunoprophylaxis of tuberculosis	2
22	Topic 36. Immunoprophylaxis of poliomyelitis	2
23	Topic 37. Support for immunoprophylaxis in society	2
24	Differential credit	2
	Total	48

5.4. Topics of laboratories

Laboratories are not provided

6. Independent work of the student

No.	Topic	Hours
1	Topic 1. The concept of immunoprophylaxis	2
2	Topic 4. Regulatory framework and organisation of vaccine prophylaxis in Ukraine. Preventive vaccination calendar	2
3	Topic 5. Socio-economic and medical-biological foundations of infectious disease prevention	2
4	Topic 8. Immune sera and immunoglobulins	2
5	Topic 9. Immunomodulators	2
6	Topic 10. Equipment for premises used for preventive vaccinations	2
7	Topic 11. Transportation and storage conditions for vaccines and toxoids. 'Cold chain'. Shake test	2
8	Topic 13. Organisation of preventive vaccinations in healthcare facilities	2
9	Topic 15. Conducting an immunisation session	2
10	Topic 18. Post-vaccination reactions and complications	2
11	Topic 19. Features of vaccination in endemic and enzootic areas	2
12	Topic 20. Vaccination for epidemic indications	2
13	Topic 25. Immunoprophylaxis of Hib infection, safety of PCV vaccination	2
14	Topic 26. Immunoprophylaxis of meningococcal infection	2
15	Topic 27. Immunoprophylaxis of papillomavirus infection	2
16	Topic 28. Immunoprophylaxis of coronavirus infection	2
17	Topic 31. Immunoprophylaxis of zoonotic infections (tularemia, brucellosis, anthrax, plague)	2
18	Topic 33. Immunoprophylaxis of tick-borne encephalitis	2
19	Topic 36. Immunoprophylaxis of poliomyelitis	2
20	Topic 37. Support for immunoprophylaxis in society	2
21	Topic 38. Overcoming vaccination 'myths'	2
	Total	42

7. Forms and methods of teaching

Practical classes: solving clinical cases, practicing the skills of providing medical care to patients from the moment of their hospitalization, examination, diagnosis, treatment until discharge from the hospital; practicing the skills of working in a team of applicants, doctors, other participants in the provision of medical care.

Self-study work: independent work with recommended basic and additional literature, with electronic information resources, preparation for practical classes; independent work with a bank of

test tasks KPOK-2, independent mastering of algorithms for communication with the patient.

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

8. Forms of control and criteria for assessing learning outcomes

Forms of ongoing control: oral questioning, testing, assessment of practical skills performance, evaluation of communication skills during role-playing, solving situational clinical problems, assessment of activity in class.

Form of final control: credit test

Current evaluation criteria in practical training

Grade	Evaluation criteria
Excellent «5»	The acquirer has a fluent command of the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills during the examination of a patient 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 acquirer has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient 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.
Satisfactory «3»	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solving of the situational clinical problem, demonstrates practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data with significant errors.
Unsatisfactory «2»	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental research data.

Only those students who have fulfilled the requirements of the curriculum for the discipline, have no academic debt, and whose average score for current academic activity in the discipline is at least 3.00 are admitted to the final assessment in the form of a differentiated test.

Differentiated credit is carried out: at the last class (the class is designated as a separate assessment measure) after the end of classes and before the start of the examination session – in the case of a linear education system, at the last class of the educational component – in the case of a cyclical education system.

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

9. Distribution of points received by acquirers of higher education

The grades from the subject for students who have successfully completed the program are

converted into a traditional four-point scale based on the absolute criteria listed in the table:

Table of conversion of traditional grade into a multi-point scale

National assessment for discipline	The sum of points for the discipline
Excellent («5»)	185-200
Good («4»)	151-184
Satisfactory («3»)	120-150
Unsatisfactory («2»)	Lower then 120

The multi-point scale (200-point scale) characterizes the actual success of each student in mastering the educational discipline. The conversion of the traditional grade to the 200-point scale is carried out by the information and technical department of the University using the program 'Contingent' according to the appropriate formula: Average success score (current success in the discipline) x 40.

The ECTS grading scale assesses the achievements of students in the educational discipline who study in the same course of the same specialty according to the scores they have received, through ranking, namely:

ECTS mark	Statistic index
“A”	Next 10% of acquirers
“B”	Next 25% of acquirers
“C”	Next 30% of acquirers
“D”	Next 25% of acquirers
“E”	Next 10% of acquirers

The ECTS grading scale establishes the student's ranking among the best or the worst within the reference group of peers (faculty, specialty), meaning their rating. When converting from a multi-point scale, the boundaries of grades 'A', 'B', 'C', 'D', 'E' do not usually correspond with the boundaries of grades '5', '4', '3' on the traditional scale. The grade 'A' on the ECTS scale cannot equal the grade 'excellent', and the grade 'B' cannot equal the grade 'good', and so forth. Students who receive the grades 'FX' and 'F' ('2') are not included in the ranked list of students. Such students automatically receive a grade 'E' after retaking the exam. The grade 'FX' is awarded to students who have scored the minimum points for current academic activity, but who have not passed the final assessment. The grade 'F' is awarded to students who have attended all classroom sessions for the course but have not achieved an average score (3.00) for current academic activity and are not allowed to take the final assessment.

10. Methodological support

- Working program of the academic discipline
- Syllabus
- Methodical developments for lecture classes
- Methodical developments for practical classes
- Methodical recommendations for independent work of acquirers of higher education
- Multimedia presentations

- Illustrative materials
- Situational clinical tasks
- Situational results of laboratory examinations
- Scenarios of role-playing games (if necessary)
- Presentations and lecture notes
- Examination tickets
- Electronic bank of test tasks KROK-2

11. Questions for the final control

1. Preparations used for immunoprophylaxis of infectious diseases. Vaccines, their types
2. Preparations used for immunoprophylaxis of infectious diseases. Anatoxins
3. Immune sera and immunoglobulins
4. Storage conditions for vaccines and anatoxins. 'Cold chain'. Shake test
5. Organisation of immunoprophylaxis in Ukraine. Articles of the Constitution of Ukraine and current laws of Ukraine. Orders of the Ministry of Health of Ukraine regulating immunoprophylaxis
6. Calendar of preventive vaccinations in Ukraine. Vaccination by age
7. Contraindications to vaccination
8. Post-vaccination reactions and complications – Lyell's syndrome
9. Post-vaccination reactions and complications – Stevens-Johnson syndrome
10. Post-vaccination reactions and complications – serum sickness
11. Post-vaccination reactions and complications – anaphylactic shock
12. Combined administration of vaccines
13. Vaccination 'myths'
14. Rules for emergency prophylaxis
15. Differences between active and passive immunoprophylaxis.
16. Modern adjuvants and their mechanisms of action.
17. Advantages and limitations of mRNA vaccines.
18. The impact of immune ageing on vaccination effectiveness.
19. The role of cellular immunity in long-term protection.
20. The impact of vaccination on herd immunity in different populations.
21. The impact of migration on vaccination programmes.
22. WHO strategies for increasing adult vaccination coverage.
23. Vaccination during humanitarian crises and wars.
24. Organising vaccination during a pandemic.
25. Socio-economic and medical-biological foundations of vaccination.
26. The impact of 'vaccine nationalism' on global security.
27. The role of B/T memory cells in post-vaccination protection.
28. The role of innate immunity in response formation.
29. Mechanisms of adverse reactions to adjuvant vaccines.
30. Advantages of DNA vaccines.
31. Artificial intelligence in vaccine development.
32. Emergency tetanus prophylaxis
33. Immunoprophylaxis of mumps
34. Immunoprophylaxis of influenza
35. Immunoprophylaxis of herpes infection
36. Vaccination against Herpes zoster in patients over 50 years of age.
37. Immunoprophylaxis of Hib infection, pneumococcal infection

38. The role of pneumococcal vaccination in COPD.
39. Immunoprophylaxis of papillomavirus infection
40. Optimal strategies for HPV vaccination in men.
41. Immunoprophylaxis of meningococcal infection
42. Immunoprophylaxis of viral hepatitis (hepatitis A, hepatitis B)
43. Additional dose of hepatitis B vaccine in case of low antibody titre.
44. Hepatitis B vaccination schedules for patients undergoing haemodialysis
45. Reasons for non-responders to hepatitis B
46. Immunoprophylaxis of typhoid fever, rotavirus infection, yellow fever
47. Immunoprophylaxis of cholera
48. Immunoprophylaxis of zoonotic infections (tularemia, brucellosis, anthrax, plague)
49. Immunoprophylaxis of rabies
50. Immunoprophylaxis of tick-borne encephalitis
51. Vaccination against Japanese encephalitis: indications.
52. Vaccination for travellers
53. Immunoprophylaxis of tuberculosis
54. Vaccination coverage threshold for measles elimination.
55. Vaccination against rubella, possible adverse events
56. Consequences of reduced polio vaccination coverage.
57. Features of vaccination of patients with immunodeficiency and immunosuppression.
58. Prospects for personalised immunoprophylaxis.
59. Vaccines contraindicated in primary immunodeficiencies.
60. Revaccination after organ transplantation: timing and schedules.
61. Vaccination of pregnant women: impact on the immunity of newborns. Vaccination during lactation.
62. Vaccination of patients with chronic liver/kidney disease.
63. When to prescribe serology to assess the post-vaccination response.
64. Vaccination of healthcare workers.

12. Recommended literature

Basic:

Pediatric infectious diseases / S.O. Kramarev, Y.P. Kcharchenko and al., 2014. – K.: VSV "Medicine" – P. 240.

Additional:

1. Infections children's diseases./ Y.P. Kcharchenko, A. M. Mikhailova, S.O. Kramarev I.V., Yurchenko, A.A. Shapovalova, A. I. Savchuk.-Odessa medical State, 2008.-P. 168
2. Orders and instructions of the Ministry of Health of Ukraine "On the improvement of ambulatory polyclinic care for children in Ukraine", "On the improvement of the organization of medical care for adolescent children", protocols for the diagnosis and treatment of diseases in children in the specialties "Pediatrics", "Children's infectious diseases", etc. Ministry of Health of Ukraine.

13. Electronic information resources

1. Ministry of Health of Ukraine: official website.URL: <https://moz.gov.ua/>.
2. World Health Organization. URL: www.who.int/ru/index.html.
3. National Health Service of Ukraine: official website. URL: <https://nszu.gov.ua/pro-nszu>.
4. National Academy of Medical Sciences of Ukraine. URL: www.amnu.gov.ua.
5. State Expert Center of the Ministry of Health of Ukraine
https://www.dec.gov.ua/cat_mtd/galuzevi-standarti-ta-klinichni-nastanovi/
6. British Medical Association - <http://bma.org.uk>
7. British Medical Journal <https://bestpractice.bmj.com>
8. Elsilver <https://www.scopus.com>