SYLLABUS

1. General information on the course

Full course name	Clinical Aspects of Immunization
Full official name of a higher education institution	Sumy State University
Full name of a structural unit	Academic and Research Medical Institute. Кафедра педіатрії
Author(s)	Vasylieva Olena Hennadiivna
Cycle/higher education level	The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle
Duration	one semester
Workload	5 ECTS, 150 hours. For full-time course 50 hours are working hours with the lecturer (50 hours of seminars), 100 hours of the individual study.
Language(s)	English

2. Place in the study programme

Relation to curriculum	Elective course available for the students of the specialty 222 "Medicine"
Prerequisites	There are no specific pre-requisites
Additional requirements	Krok-1, Microbiology, Virology and Immunology, Life Safety; Basics of Bioethics and Biosafety, Human Anatomy, Pathomorphology and Pathophysiology, Pharmacology, Hygiene and Ecology, Pediatrics
Restrictions	There are no specific restrictions

3. Aims of the course

The objective of the discipline is to provide modern knowledge and professional skills in the fundamentals of immunoprophylaxis for infectious diseases. This includes studying immunization drugs, vaccination methods and schedules according to the vaccination calendar, vaccine storage requirements, medical documentation, analysis and interpretation of potential adverse immunization events, and planning measures to prevent the spread of infectious diseases.

4. Contents

Module 1. Fundamentals of Immunoprophylaxis

Topic 1 General Overview of Immunoprophylaxis Historical, medical, social, and economic aspects of vaccine-preventable infections in Ukraine and worldwide. Vaccine myths. The concept of immunity. Types of immunity. Fundamentals of the immune response as an outcome of vaccination. The role of immunoprophylaxis in the system of preventive and anti-epidemic measures. Specific features of the epidemiological processes of vaccine-preventable infections. Organizational and legal foundations of immunoprophylaxis.
Topic 2 Active Immunoprophylaxis Classification and composition of preparations for active immunoprophylaxis, routes of administration, storage of vaccines and toxoids, and the cold chain.
Topic 3 Vaccination Schedule in Ukraine Age-appropriate vaccination, vaccination with deviations from the immunization schedule, contraindications to vaccination, adverse vaccination reactions, their prevention, and adverse events following immunization (AEFI).
Topic 4 Immunoprophylaxis of Infectious Diseases in Individuals with Health Disorders Immunoprophylaxis of infectious diseases in individuals with compromised health and in special conditions.
Topic 5 Passive Immunoprophylaxis The concept of passive immunity. Preparations of normal human immunoglobulin, specific immunoglobulins, and hyperimmune sera.
Topic 6 Conducting an Immunization Session Preparation for the session, communication, assessment of the child's condition, vaccination administration, closing the immunization session, and recording data.
Module 2. Immunoprophylaxis of Specific Infections
Topic 7 Immunoprophylaxis of Hepatitis B Clinical aspects of hepatitis B immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 8 Immunoprophylaxis of Diphtheria, Tetanus, and Pertussis Clinical aspects of immunoprophylaxis for diphtheria, tetanus, and pertussis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 9 Immunoprophylaxis of Haemophilus Influenzae Infection Clinical aspects of Haemophilus influenzae immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.

Topic 10 Immunoprophylaxis of Measles, Rubella, and Mumps Clinical aspects of immunoprophylaxis for measles, rubella, and mumps, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination for pregnant and breastfeeding women, vaccination effectiveness, and duration of protection.
Topic 11 Immunoprophylaxis of Varicella and Herpes Infections Clinical aspects of immunoprophylaxis for varicella and herpes infections, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination for pregnant and breastfeeding women, vaccination effectiveness, and duration of protection.
Topic 12 Immunoprophylaxis of Poliomyelitis Clinical aspects of poliomyelitis immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 13 Immunoprophylaxis of Rotavirus Infection Clinical aspects of rotavirus immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 14 Immunoprophylaxis of COVID-19 Clinical aspects of COVID-19 immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination for pregnant and breastfeeding women, vaccination effectiveness, and duration of protection.
Topic 15 Immunoprophylaxis of Meningococcal Infection Clinical aspects of meningococcal immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 16 Immunoprophylaxis of Pneumococcal Infection Clinical aspects of pneumococcal immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 17 Immunoprophylaxis of Human Papillomavirus (HPV) Clinical aspects of HPV immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 18 Immunoprophylaxis of Rabies Clinical aspects of rabies immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.

Topic 19 Immunoprophylaxis of Yellow Fever Clinical aspects of yellow fever immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 20 Immunoprophylaxis of Hepatitis A Clinical aspects of hepatitis A immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 21 Immunoprophylaxis of Tuberculosis Clinical aspects of tuberculosis immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 22 Immunoprophylaxis of Tick-Borne Encephalitis Clinical aspects of tick-borne encephalitis immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 23 Immunoprophylaxis of Typhoid Fever Clinical aspects of typhoid fever immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination effectiveness, and duration of protection.
Topic 24 Immunoprophylaxis of Seasonal Influenza Clinical aspects of influenza immunoprophylaxis, active immunoprophylaxis preparations, indications, contraindications, vaccination schedules, methods of vaccine administration, vaccination for pregnant and breastfeeding women, vaccination effectiveness, and duration of protection.
Module 3. Certification Measures
Topic 25 Practice-Oriented Differentiated Assessment Conducting testing, oral questioning, and evaluation of practical skills.

5. Intended learning outcomes of the course

After successful study of the course, the student will be able to:

LO1	Collect complaints, life and disease history, assess the patient's psychomotor and physical development, the condition of the body's organs and systems, and based on the results of laboratory and instrumental studies, evaluate information regarding the diagnosis, taking into account the patient's age.
LO2	Establish a final clinical diagnosis by making a reasoned decision and analyzing the obtained subjective and objective data of clinical, additional examination, conducting differential diagnostics, adhering to relevant ethical and legal norms, under the supervision of the head physician in a healthcare facility.

LO3	Determine the main clinical syndrome or what determines the severity of the victim's condition (according to list 3) by making a reasoned decision and assessing the person's condition under any circumstances (in a healthcare facility, outside it), including in emergency situations and combat operations, in field conditions, in conditions of lack of information and limited time.
LO4	Perform medical manipulations (according to list 5) in a medical institution, at home or at work based on a preliminary clinical diagnosis and/or indicators of the patient's condition by making an informed decision, adhering to relevant ethical and legal norms.
LO5	Determine tactics and provide emergency medical care for urgent conditions (according to list 3) in conditions of limited time in accordance with existing clinical protocols and treatment standards.
LO6	To plan and implement a system of sanitary and preventive measures against the occurrence and spread of diseases among the population.
LO7	To analyze epidemiological situation and carry out measures of mass and individual, general and local prevention of infectious diseases.
LO8	Plan, organize and conduct activities 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 activities.
LO9	Organize the necessary level of individual safety (one's own and those in one's care) in the event of typical dangerous situations in one's individual field of activity.

7. Soft Skills

SS1	Ability to abstract thinking, analysis, and synthesis.
SS2	Ability to learn, master modern knowledge, and apply the knowledge in practice.
SS3	Knowledge and understanding of the subject area and professional activity comprehension.
SS4	Ability to adapt and act in a new situation.
SS5	Ability to make informed decisions and work in a team; interpersonal skills.
SS6	Determination and persistence on the tasks and commitments undertaken.

8. Teaching and learning activities

Topic 1. General Overview of Immunoprophylaxis
pr.tr.1 "General characteristics of immunoprophylaxis." (full-time course) Fundamentals of immunoprophylaxis: principles of preventing infectious diseases through the development of specific immunity. Types of immunoprophylaxis: active (vaccination) and passive (administration of immunoglobulins or sera). The role of immunoprophylaxis in reducing morbidity and mortality rates. Features of routine and emergency immunoprophylaxis.

Topic 2. Active Immunoprophylaxis

pr.tr.2 "Active immunoprophylaxis." (full-time course)

The essence of active immunoprophylaxis: the formation of long-term immunity through vaccination. Types of vaccines: live, inactivated, subunit, conjugate, RNA vaccines and combination vaccines. The mechanism of action of vaccines: how they stimulate the immune system to create specific protection.

Topic 3. Vaccination Schedule in Ukraine

pr.tr.3 "Vaccination Schedule in Ukraine" (full-time course)

The essence and significance of the calendar of preventive vaccinations: its role in planning vaccinations to protect the population. The approved vaccination calendar in Ukraine: a list of infections against which vaccinations are carried out, and the age limits for their implementation. Mandatory and recommended vaccinations: differences, significance and priorities. Features of vaccination of certain groups of the population: newborns, children, pregnant women, people from risk groups. Emergency immunoprophylaxis: cases when vaccinations are carried out unscheduled. Control and monitoring of the calendar implementation: reporting, provision of vaccines and organization of vaccination. International vaccination requirements: vaccinations for travel and entry into other countries.

Topic 4. Immunoprophylaxis of Infectious Diseases in Individuals with Health Disorders

pr.tr.4 "Immunoprophylaxis of Infectious Diseases in Individuals with Health Disorders" (full-time course)

Features of the immune system in patients with health disorders: Immunodeficiency states (congenital and acquired). Chronic diseases (cardiovascular, respiratory, endocrine). Weakened immunity due to oncological or autoimmune diseases. Principles of vaccination of such persons. Choice of vaccines: live and inactivated vaccines. Dosage and vaccination schedule taking into account health status. Possibility of using additional vaccinations. Risks and safety of vaccination. Vaccination planning: Individualized approach to drawing up a vaccination schedule. Taking into account immunosuppressive therapy, for example, in patients with transplantation or during chemotherapy. The role of passive immunoprophylaxis: Use of immunoglobulins or specific antibodies for temporary protection. Educational work and support of such patients: Informing patients about the importance of vaccinations. Monitoring their compliance with the vaccination schedule and preventive measures.

Topic 5. Passive Immunoprophylaxis

pr.tr.5 "Passive Immunoprophylaxis" (full-time course)

The essence of passive immunoprophylaxis, types of passive immunoprophylaxis: specific: the use of antibodies to a specific pathogen (for example, anti-diphtheria or anti-tetanus serum), non-specific: the use of polyvalent immunoglobulins. Indications for use. Emergency prophylaxis after contact with an infection (for example, rabies, tetanus, viral hepatitis B). Immunodeficiency states when active vaccination is impossible. Prophylaxis in newborns (transfer of antibodies from the mother). Preparations for passive immunoprophylaxis: ready-made immunoglobulins (human, animal). Antitoxic sera (for example, botulinum, anti-diphtheria). Advantages and disadvantages of using passive immunoprophylaxis. Precautions and contraindications. Taking into account immunological incompatibility when administering animal sera. Role in modern medicine.

Topic 6. Conducting an Immunization Session

pr.tr.6 "Conducting an Immunization Session" (full-time course)

Preparatory stage. Checking the status of vaccines: compliance with the "cold chain" conditions. Completing the necessary equipment. Preparing documentation. Informing patients: Providing information about the vaccine, its effectiveness and possible reactions. Obtaining consent for vaccination. Medical examination: Assessing the patient's health. Identifying contraindications to vaccination (temporary or permanent). Conducting vaccination: Compliance with asepsis and antiseptics. Administering the vaccine in accordance with the instructions (choosing a place and technique for administration). Registration of the vaccination in medical documentation. Post-vaccination monitoring. Completion of the session. Disposal of used materials in accordance with sanitary standards. Preparing reports on the number of vaccinated and the use of drugs. Planning the next session.

Topic 7. Immunoprophylaxis of Hepatitis B

pr.tr.7 "Immunoprophylaxis of Hepatitis B" (full-time course)

The causative agent of viral hepatitis B. Risks of infection. Immunoprophylaxis system. Indications for vaccination. Administration of specific immunoglobulin and vaccine after possible contact with the virus. Contraindications and side effects. Effectiveness of vaccination. Level of protection after vaccination, duration of immunity and possibility of revaccination. Monitoring and control.

Topic 8. Immunoprophylaxis of Diphtheria, Tetanus, and Pertussis

pr.tr.8 "Immunoprophylaxis of Diphtheria, Tetanus, and Pertussis" (full-time course)

Characteristics of pathogens. Transmission routes. Risks, forms and complications of these diseases. Vaccination: types of vaccines, application regimens. Contraindications and adverse reactions. Emergency immunoprophylaxis: administration of anti-diphtheria and anti-tetanus serum in case of injury or contact with a patient. Effectiveness of vaccination.

Topic 9. Immunoprophylaxis of Haemophilus Influenzae Infection

pr.tr.9 "Immunoprophylaxis of Haemophilus Influenzae Infection" (full-time course)

Pathogen of hemophilic infection. Transmission routes. Forms of the disease. Indications for vaccination. Vaccination: types of vaccines, regimens, course. Emergency immunoprophylaxis. Effectiveness of vaccination. Side effects.

Topic 10. Immunoprophylaxis of Measles, Rubella, and Mumps

pr.tr.10 "Immunoprophylaxis of Measles, Rubella, and Mumps" (full-time course)

Pathogens of these diseases. Ways of their transmission. Forms of diseases, complications. Indications for vaccination. Vaccination: types of vaccines, schemes, course. Emergency immunoprophylaxis. Effectiveness of vaccination. Side effects.

Topic 11. Immunoprophylaxis of Varicella and Herpes Infections

pr.tr.11 "Immunoprophylaxis of Varicella and Herpes Infections" (full-time course)

Pathogens of these diseases. Ways of their transmission. Forms of diseases, complications. Indications for vaccination. Vaccination: types of vaccines, schemes, course. Emergency immunoprophylaxis. Effectiveness of vaccination. Side effects.

Topic 12. Immunoprophylaxis of Poliomyelitis

pr.tr.12 "Immunoprophylaxis of Poliomyelitis" (full-time course)

Pathogen of poliomyelitis. Ways of transmission. Vaccination: Oral polio vaccine (OPV) and Inactivated polio vaccine (IPV). Indications for vaccination. Contraindications and side effects. Vaccination effectiveness. Emergency immunoprophylaxis. Goals and achievements.

Topic 13. Immunoprophylaxis of Rotavirus Infection

pr.tr.13 "Immunoprophylaxis of Rotavirus Infection" (full-time course)

The pathogen of rotavirus infection. Routes of transmission. Forms of diseases, complications. Indications for vaccination. Vaccination: types of vaccines, regimens, course. Vaccination effectiveness. Side effects.

Topic 14. Immunoprophylaxis of COVID-19

pr.tr.14 "Immunoprophylaxis of COVID-19" (full-time course)

The pathogen of COVID-19. Routes of transmission. Vaccination: regimens, types and types of vaccines. Indications for vaccination. Contraindications to vaccination. Side effects. Vaccination effectiveness. Revaccination. Emergency immunoprophylaxis: For people who cannot receive the vaccine, as well as after contact with patients, drugs or monoclonal antibodies can be used that reduce the risk of severe disease. Global efforts and achievements.

Topic 15. Immunoprophylaxis of Meningococcal Infection

pr.tr.15 "Immunoprophylaxis of Meningococcal Infection" (full-time course)

The causative agent of meningococcal infection. Routes of transmission. Forms of the disease, risks and complications. Indications for vaccination. Vaccination: types of vaccines, schemes, course. Emergency prophylaxis. Effectiveness of vaccination. Side effects.

Topic 16. Immunoprophylaxis of Pneumococcal Infection

pr.tr.16 "Immunoprophylaxis of Pneumococcal Infection" (full-time course)

The causative agent of pneumococcal infection. Routes of transmission. Forms of the disease, risks and complications. Indications for vaccination. Vaccination: types of vaccines, schemes, course. Effectiveness of vaccination. Side effects. Emergency prevention.

Topic 17. Immunoprophylaxis of Human Papillomavirus (HPV)

pr.tr.17 "Immunoprophylaxis of Human Papillomavirus (HPV)" (full-time course)

The causative agent of human papillomavirus infection. Transmission routes. Forms of diseases, risks and complications. Indications for vaccination. Vaccination: types of vaccines, schemes, course. Effectiveness of vaccination. Side effects. Emergency prevention.

Topic 18. Immunoprophylaxis of Rabies

pr.tr.18 "Immunoprophylaxis of Rabies" (full-time course)

Rabies pathogen. Transmission routes. Forms of disease, risks and complications. Indications for vaccination. Vaccination: types of vaccines, regimens, course. Vaccination effectiveness. Side effects. Emergency prophylaxis.

Topic 19. Immunoprophylaxis of Yellow Fever

pr.tr.19 "Immunoprophylaxis of Yellow Fever" (full-time course)

Yellow fever pathogen, distribution. Transmission routes. Forms of disease, risks and complications. Indications for vaccination. Vaccination: types of vaccines, regimens, course. Vaccination effectiveness. Side effects. Emergency prophylaxis. Vaccination of travelers.

Topic 20. Immunoprophylaxis of Hepatitis A

pr.tr.20 "Immunoprophylaxis of Hepatitis A" (full-time course)

Hepatitis A pathogen. Transmission routes. Forms of diseases, risks and complications. Indications for vaccination. Vaccination: types of vaccines, schemes, course. Vaccination effectiveness. Side effects. Emergency prevention.

Topic 21. Immunoprophylaxis of Tuberculosis

pr.tr.21 "Immunoprophylaxis of Tuberculosis" (full-time course)

The causative agent of tuberculosis. Transmission routes. Vaccination: schemes, types of vaccines. Indications for vaccination. Contraindications to vaccination. Side effects. Vaccination effectiveness. Revaccination. Emergency prevention. Global efforts and achievements.

Topic 22. Immunoprophylaxis of Tick-Borne Encephalitis

pr.tr.22 "Immunoprophylaxis of Tick-Borne Encephalitis" (full-time course)

The causative agent of tick-borne encephalitis. Prevalence of the disease. Transmission routes. Forms of diseases, risks and complications. Indications for vaccination. Vaccination: types of vaccines, schemes, course. Vaccination effectiveness. Side effects. Emergency prevention.

Topic 23. Immunoprophylaxis of Typhoid Fever

pr.tr.23 "Immunoprophylaxis of Typhoid Fever" (full-time course)

The causative agent of typhoid fever. Vaccination of travelers, endemicity and prevalence of the disease. Transmission routes. Forms of diseases, risks and complications. Indications for vaccination. Vaccination: types of vaccines, schemes, course. Vaccination effectiveness. Side effects. Emergency prevention.

Topic 24. Immunoprophylaxis of Seasonal Influenza

pr.tr.24 "Immunoprophylaxis of Seasonal Influenza" (full-time course)

Influenza pathogens, their specificity. Drift and gene shift. Transmission routes. Forms of diseases, risks and complications. Indications for vaccination. Vaccination: types of vaccines, schemes, course. Vaccination effectiveness. Side effects. Emergency prevention.

Topic 25. Practice-Oriented Differentiated Assessment

pr.tr.25 "Practice-Oriented Differentiated Assessment" (full-time course) Testing, survey.

9. Teaching methods

9.1 Teaching methods

Course involves learning through:

TM1	Case-based learning
TM2	Electronic learning
TM3	Research Based Learning
TM4	Self-study
TM5	Team Based Learning

The discipline is taught using modern teaching methods, which not only promote the development of professional skills, but also stimulate creative and scientific activity and aimed at training practice-oriented specialists.

Acquisition of soft skills by students is carried out during the entire period of studying the discipline. The ability for analytical and critical thinking, teamwork, perseverance is formed during team-, practice- and case-oriented training, knowledge and understanding of the subject area is acquired during lectures, self-study. E-learning stimulates the ability to use information technologies. Research-based learning encourages the development of certainty and persistence in tasks and responsibilities.

9.2 Learning activities

LA1	Preparation for practical classes
LA2	Work with textbooks and relevant information sources
LA3	Electronic learning in systems (Meet, MiX.sumdu.edu.ua)
LA4	Individual research project (student research work, article, thesis, etc.)
LA5	Preparation for differential assessment
LA6	Clinical case analysis
LA7	Performing a group practical task

10. Methods and criteria for assessment

10.1. Assessment criteria

Definition	National scale	Rating scale
Outstanding performance without errors	5 (Excellent)	$170 \leq RD \leq 200$
Above the average standard but with minor errors	4 (Good)	$164 \leq RD < 169$
	4 (Good)	$140 \leq RD < 163$
Fair but with significant shortcomings	3 (Satisfactory)	$127 \leq RD < 139$

	3 (Satisfactory)	120 ≤ RD < 126
Fail – some more work required before the credit can be awarded	2 (Fail)	70 ≤ RD < 119
	2 (Fail)	0 ≤ RD < 69

10.2 Formative assessment

	Description	**Deadline, weeks**	**Feedback**
FA1 Diagnostic testing	A method of effective verification of the level of assimilation of knowledge, abilities and skills from each subject of an educational discipline. Testing allows you to check the assimilation of educational material from each subject.	During the entire period of studying the discipline	The student must provide 60% of the correct answers, which is an admission to the practical part of the lesson.
FA2 Teacher's instructions in the process of practical tasks	The guidelines reveal the methods of pedagogical control over the professional activities of applicants. Efficiency is determined by compliance with all stages of practical tasks. The effectiveness of the formation of the necessary practical skills and abilities depends on the level of formation of practical competence.	During the entire period of studying the discipline	Counseling of students in working with a standardized patient, direct and indirect observation of the work of applicants "at the patient's bedside" with further determination of the level of practical training
FA3 Peer assessment	Partnership interaction aimed at improving the results of educational activities by comparing one's own current level of success with previous indicators. Provides an opportunity to analyze one's own educational activities.	Throughout the entire period of studying the discipline	Adjustment of approaches to learning together with students, taking into account the results of the assessment.

FA4 Interviews and oral comments of the teacher on the results of students	It provides an opportunity to identify the state of educational experience acquired by students in accordance with the set goals, to find out the prerequisites of the state of formation of the obtained results, the causes of difficulties, to adjust the learning process, to track the dynamics of the formation of learning results and to forecast their development.	During the entire period of studying the discipline	According to the obtained data on the results of training, based on their analysis, it is proposed to determine the evaluation as an indicator of the achievements of the educational activities of the applicants
FA5 Consulting the teacher during the preparation of an individual research project (speech at a conference, competition of scientific papers)	An important factor in the formation of professional qualities of future specialists is the research work of students. Involvement of the latter in research activities contributes to the formation of their scientific worldview, industriousness, work capacity, initiative, etc.	During the entire period of studying the discipline	Teacher's oral comments. The student is given additional incentive points (from 5 to 10), depending on the type of research project.
FA6 Solving situational problems	The case method allows you to reveal and form the qualities and abilities of medical students necessary for further work, forms clinical thinking, analytical abilities, independence in decision-making, communication skills, skills for working with a sufficiently large amount of information.	During the entire period of studying the discipline	Assessment of the student's ability to think clinically, justify their decisions, clearly express their opinions, determine the level of theoretical training, which is reflected in the corresponding assessment.

10.3 Summative assessment

	Description	Deadline, weeks	Feedback

SA1 Assessment of the level of theoretical training	Forms the skills of independent activity in students, encourages them to strive for exploratory knowledge. Stimulates students to work with the necessary literature, transfers the learning process from the level of passive absorption of information to the level of its active transformation.	During the entire period of studying the discipline	Held at each class, the result of performing the research work affects the comprehensive assessment for the practical class
SA2 Differentiated crediting (in accordance with the regulations)	Compilation of differential calculation. Applicants who have successfully mastered the material of the discipline and scored a minimum of 72 points in the current class are allowed to take the test.	According to the schedule	A student can get 80 points for credit. The minimum number of points a student must receive is 48 points

Form of assessment:

	Points	Можливість перескладання з метою підвищення оцінки
The first semester of teaching	**200 scores**	
SA1. Assessment of the level of theoretical training	**120**	
Oral survey, performance of a group case, clinical case.	120	No
SA2. Differentiated crediting (in accordance with the regulations)	**80**	
Testing (30x1), Theoretical question and situational problem (2x25)	80	No

When mastering the materials of the discipline, the student is assigned a maximum of 5 points for each practical session (the grade is given in the traditional 4-point grading system) for testing and oral answers. The test control is considered passed if the student answered 60% of the questions correctly (6 correct answers out of 10 questions). At the end of the study of the discipline, the arithmetic average of the student's performance is calculated. The number of student points is calculated using the formula of multiplying 120 by the arithmetic mean and dividing by 5. The maximum number of points for the student's current educational activity is 120. The student is admitted to the differentiated assessment on the condition that the requirements of the educational program are met and in the event that for the current educational activity he scored no less than 72 points. Differentiated assessment is conducted at the end of the academic semester in oral form, while the grade "5" corresponds to 80 points, "4" - 64 points, "3" - 48 points, "2" - 0 points. Incentive points are added to the evaluation of the discipline for the implementation of an individual research project (defense of a student's scientific work - 12 points, speech at a conference - 5 points, poster presentation at a conference - 4 points, theses of reports - 3 points). The total score for the discipline cannot exceed 200 points. The possibility of re-enrollment of points in the system of non-formal education in accordance with the Regulation.

11. Learning resources

11.1 Material and technical support

MTS1	Information and communication systems
MTS2	Library funds
MTS3	Medical facilities / premises and equipment (university clinic, vaccination rooms of children's clinics)
MTS4	Projection equipment
MTS5	Software (to support distance learning, Internet surveys, virtual laboratories, virtual patients, to create computer graphics, modeling, etc.)
MTS6	Multimedia, video and sound reproduction, projection equipment (video cameras, projectors, screens, smart boards, etc.)

11.2 Information and methodical support

Essential Reading	
1	Pediatric Infectious Diseases: textbook / S.O. Kramarov, O.B. Nadraga, L.V. Pypa et al. - 4th edition.- Medicine.- 2020.- 240 p.
2	Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / O. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi. — Vinnitsia : Nova Knyha, 2020. — 440 p.
Supplemental Reading	
3	Nelson Textbook of Pediatrics, 2-Volume.- Set 21st .- Robert Kliegman Joseph St. Geme Imprint: Elsevier.- 2019.- 4264 p.
4	United Nations Children’s Fund, The State of the World’s Children 2023: For every child, vaccination, UNICEF Innocenti – Global Office of Research and Foresight, Florence, April 2023.
5	Vaccine Science and Immunization Guideline [Електронний ресурс] : A Practical Guide for Primary Care / edited by Pamela G. Rockwell, DO. — 1st ed. 2017. — Cham : Springer International Publishing, 2017. — XII, 307 p. 37 illus., 26 illus. in color.
Web-based and electronic resources	
5	https://www.who.int/teams/immunization-vaccines-and-biologicals
6	https://pubmed.ncbi.nlm.nih.gov/ PubMed
7	https://www.nlm.nih.gov/ U. S. National Library of Medicine
8	https://www.who.int/wer/en/ Weekly Epidemiological Record
9	https://www.cdc.gov/ Centers for Disease Control and Prevention