

# VINNYTSIA NATIONAL PIROGOV MEMORIAL MEDICAL UNIVERSITY

APPROVE

Higher Educational Institution

Vice-Rector for Scientific and

Academic Work and International Links

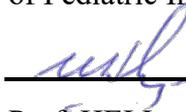


Inna ANDRUSHKO

“AGREED ”

Head of the Department

of Pediatric Infectious Diseases



Prof. HEI Iryna NEZGODA

“   29   ”   08   2024 year

## SYLLABUS of Academic Discipline

### IMMUNOPROPHYLAXIS OF INFECTIOUS DISEASES IN CHILDREN

|                                  |  |
|----------------------------------|--|
| Specialty                        | 222 Medicine   |
| Educational Level                | the second (master`s) level  |
| Educational Program              | <i>EPP "Medicine", 2020</i>  |
| Academic Year                    | 2024-2025  |
| Department                       | Pediatric Infectious Diseases  |
| Lecturer (if lectures are given) | not provided by the curriculum   |
| Contact Information              | Email: <a href="mailto:child.onfection@ynmu.edu.ua">child.onfection@ynmu.edu.ua</a>  |
| Syllabus Compilers               | Associate Professor, PhD HEI Olena ONOFRIICHUK,<br>Assistant HEI Yaroslav DEMCHYSHYN |

## 1. Status and Discipline Structure

|  |  |
|--|--|
| Discipline Status  | Elective   |
| Discipline code in OPP / place of discipline in OPP                      | EB P-1. Immunoprophylaxis of infectious diseases in children // discipline of professional training  |
| Course / semester  | 6 course (XII semester)  |
| Scope of the discipline (total number of hours / number of ECTS credits) | 60 hours / 2 credits ECTS  |
| Number of content modules  | 2 content modules  |
| Discipline Structure   | Lectures are not provided in the curriculum<br>Practical classes - 25 hours<br>Self-study - 35 hours |
| Language of instruction  | English  |
| Form of study  | Full-time (or remote by order)   |

### 1. Discipline Description

**The subject** the study of the discipline is study of features of approaches to immunoprophylaxis of infectious diseases in children according to the current legislation, taking into account age features of a children's organism.

**Prerequisites.** The discipline "Immunoprophylaxis of infectious diseases in children" is based on the study of histology, pathological anatomy, medical biology and genetics, medical and biological physics, medical chemistry, biological and bioorganic chemistry, morphological disciplines, normal and pathological physiology, propaedeutics. pharmacology and integrates with these disciplines.

**The purpose** of learning of the discipline "Immunoprophylaxis of Infectious Diseases in Children" is getting deep theoretical knowledge, improvement and mastery of practical skills in vaccine prophylaxis in children to get better approach in the professional level of knowledge in the field of pediatric infectious diseases.

**Postrequisites.** In the process of studying the discipline, the knowledge which are necessary for the successful mastering of the disciplines of professional training is acquired, namely: clinical immunology and allergology (knowledge of the principles and mechanisms of induction of immune response to immunobiological drugs), medical genetics (features of immunization of children with orphan diseases), pediatric surgery (features of management of surgical conditions associated with immunization), resuscitation (management of emergencies, occur during the introduction of immunobiological drugs), cardiology (features of secondary prevention of cardiovascular lesions), medical psychology (medical and psychological counseling of patients during immunization), psychiatry (monitoring of mental phenomena that occur as a reaction to the introduction of immunobiological drugs), nervous diseases (specific and nonspecific lesions of the nervous system, which occur against the background of the introduction of immunobiological drugs), phthisiatry (management of conditions, associated with the use of tuberculin and BCG vaccine), which provides for the integration of teaching with these disciplines and the application of acquired knowledge, skills and abilities in the process of further study and professional activities.

### 2. Learning Outcomes.

After successfully studying the discipline, the applicant can:

- draw up a plan of examination and analyze the data of laboratory and instrumental examinations that can be performed during the immunization of children;
- to carry out differential diagnosis of emergencies associated with the introduction of immunobiological drugs for the prevention of infectious diseases of childhood;
- provide emergency care to children with emergencies that occurred during immunization;
- administer immunobiological drugs depending on the age of the child and the type of drug;

- demonstrate mastery of moral and deontological principles of a medical specialist and the principles of professional subordination in pediatrics during immunization;
- keep medical records;
- to form and analyze an individual vaccination calendar for children of different ages;
- to carry out immunization of the children's population according to the current legislation.

### 3. Content and Discipline Logistics

|   |  |  |
|---|--|--|
| <b>Module 1.<br/>Immunoprophylaxis<br/>of infectious diseases<br/>in children</b> | XII semester<br>60 hours / 2 ECTS<br>credits | Lectures - not provided by the curriculum.<br>Practical classes - №№ 1-8.<br>Topics for self-study are not provided in the curriculum. |
|---|--|--|

**The course includes 8 topics, which are divided into 2 thematic modules.**

**Practical classes** provide a theoretical justification for the main issues of the topic.

**Topic 1.** General information about immunity and immunopathological conditions. Features of the immune system in children.

**Topic 2.** Organization of immunoprophylaxis in Ukraine. Articles of the Constitution of Ukraine and current Laws of Ukraine, bylaws governing the immunoprophylaxis of infectious diseases. Orders of the Ministry of Health of Ukraine regulating immunoprophylaxis in children.

**Topic 3.** Immunobiological drugs used for the prevention of infectious diseases: vaccines and immunoglobulins. Vaccines and their classification. The composition of vaccines. Features of storage and transportation of vaccines. Mechanisms of induction of immune response to immunobiological drugs.

**Topic 4.** The concept of "scheduled" and "emergency" immunization. Calendar of preventive vaccinations in Ukraine. Features of immunization of children by age according to the current legislation.

**Topic 5.** Post-vaccine reactions and complications. Features of condition management in the post-vaccination period. Management of emergencies related to vaccination.

**Topic 6.** Immunoprophylaxis of bacterial infectious diseases in children (tuberculosis, pertussis, diphtheria, tetanus, hemophilic infection, meningococcal infection, pneumococcal infection, etc.): clinical aspects, drugs for immunization, indications and contraindications, immunization regimens and methods of vaccination, side effects and reactions, effectiveness of immunization and duration of protection.

**Topic 7.** Immunoprophylaxis of viral infectious diseases in children (viral hepatitis A, viral hepatitis B, polio, measles, rubella, mumps, chickenpox, papillomavirus infection, rotavirus infection, tick-borne encephalitis, influenza, coronavirus and infection, scanavirus and infection). clinical aspects, immunization preparations, indications and contraindications, immunization regimens and methods of vaccine administration, reactions to vaccine administration, side effects and reactions, effectiveness of immunization and duration of protection.

**Topic 8.** Features of immunization of children with a violation of the vaccination calendar. The concept of "catch-up" immunization. Features of immunization of children for health reasons. Immunization for epidemic, endemic and enzootic indications. Immunoprophylaxis of especially dangerous infections.

**Practical classes** according to the method of their organization are clinical, because the practical classes provide:

- draw up a plan of examination and analyze the data of laboratory and instrumental examinations that can be performed during the immunization of children;
- to carry out management of emergency conditions which are connected with introduction of immunobiological drugs for the purpose of prevention of infectious diseases of children's age;
- provide emergency care to children with emergencies that occurred during immunization;

- administer immunobiological drugs depending on the age of the child and the type of drug;
- keep medical records;
- to form and analyze an individual vaccination calendar for children of different ages;
- to carry out immunization of the children's population according to the current legislation.

**Self-preparing work of students** provides preparation for practical classes, theoretical training and development of practical skills, preparation of presentation material. The control of mastering the topics of independent extracurricular work is carried out during practical classes in the discipline.

**Individual work** includes preparation of reports for participation in scientific group meetings, student scientific conferences, writing scientific articles and abstracts based on the results of scientific practical research or review of scientific sources on a particular scientific or practical problem, preparation and participation in university and All-Ukrainian stages of Olympiads in pediatrics, infectious diseases, clinical immunology, preparation of scientific works for the All-Ukrainian competition of student scientific works in the specialty "Children's infectious diseases", "Pediatrics", "Clinical immunology".

Thematic plans of practical classes, calendar plans of practical classes, thematic plan of independent extracurricular work, the volume and directions of individual work are published on the website of the department.

Route of receiving materials: Department of Pediatric Infectious Diseases / Student / Full-time study / Medicine / 6th year / Teaching materials / or by link <https://www.vnmu.edu.ua>/Department of Pediatric Infectious Diseases #. Access to materials is provided from the student's corporate account: s000XXX@vnmu.edu.ua.

#### 4. Forms and methods of monitoring learning success

|   |   |
|---|---|
| Current control in practical classes                          | Methods: oral or written survey, testing, electronic survey, solving situational problems, conducting laboratory tests, their interpretation and evaluation of their results, analysis of patient vaccination cards       |
| Final control of the discipline<br>( <i>summary control</i> ) | According to the Regulations on the organization of the Academic process at M.I.Pyrogov MMU, Vinnytsya (link <a href="https://www.vnmu.edu.ua/General">https://www.vnmu.edu.ua/General</a> information / Basic documents) |
| Learning success diagnostic tools                             | Theoretical questions, tests, clinically-oriented situational tasks, practical tasks, demonstration of practical skills, analysis of patient vaccination cards  |

#### 6. Assessment criteria

Knowledge assessment is carried out in accordance with the Regulations of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/en/general-regulations> ).

|   |  |
|---|--|
| Continuous Assessment   | According to the four-point system of traditional grades: 5 "excellent", 4 "good", 3 "satisfactory", 2 "unsatisfactory"  |
| Final control of the discipline<br>( <i>summary control</i> ) | On a 200-point scale (the arithmetic mean for the semester is converted into points).<br>Credited: from 122 to 200 points<br>Not credited: less than 122 points (see rating scale) |

During distance learning using the Microsoft Teams platform, the assessment of oral and written answers is carried out using generally accepted criteria. Contact information of the

department: email: [child.infection@vnmuedu.ua](mailto:child.infection@vnmuedu.ua); associate professor Olena ONOFRIICHUK, tel. 0677337838.

### Discipline Score Scale: National and ECTS

| The sum of grades for all types of educational activities | Score ECTS | Score on a national scale                                   |  |
|---|------------|---|--|
|   |            | For exam, course project (work), practice                   | for credit test  |
| <b>180-200</b>  | <b>A</b>   | excellent   | credited   |
| <b>170-179,99</b>   | <b>B</b>   | good  |  |
| <b>160-169,99</b>   | <b>C</b>   |   |  |
| <b>141-159,99</b>   | <b>D</b>   | satisfactory  |  |
| <b>122-140,99</b>   | <b>E</b>   | satisfactory  |  |
| <b>60-121,99</b>  | <b>FX</b>  | unsatisfactory with the possibility of reassembly           | is not credited with the possibility of reassembling       |
| <b>0-59,9</b>   | <b>F</b>   | unsatisfactory with a mandatory reexamination of discipline | is not credited with mandatory reexamination of discipline |

#### 7. Course Policy.

The student has the right to receive high-quality educational services, access to contemporary scientific and educational information, qualified advisory assistance during the study of discipline and mastering practical skills. The policy of the department during the providing of educational services is a student-centered, based on normative documents of the Ministry of Education and the Ministry of Health of Ukraine, the Statute of the University and the Procedure for the Providing of Educational Services regulated by the main principles of the organization of the educational process in National Pirogov Memorial Medical University, Vinnytsia and the principles of academic integrity ( link <https://www.vnmuedu.ua/en/general-regulations> ).

**Compliance with the rules of procedure of National Pirogov Memorial Medical University, Vinnytsia safety in practical classes.** Instruction on safety, safety of treatment of patients with infectious diseases is carried out at the first practical lesson by the teacher. The briefing is recorded in the Safety Instruction Log. A student who has not been instructed is not allowed to perform practical work. During the martial law caused by the aggression of the Russian Federation, in order to maximally ensure safe conditions for the participants of the educational process, the unified instruction on the procedure for the actions of education seekers, scientific and pedagogical workers and other employees of VNMU should be used. E. Pirogov during the "AIR ALARM" signal. The briefing is conducted by the teacher at the beginning of the class with the determination of the route and order of movement to the shelter.

**Requirements for preparation for practical classes.** The student must be prepared for a practical classes, test tasks for the current topic should be solved in a workbook.

You should come to class on time, without delay. A student who is more than 10 minutes late for class is not allowed to the last and must work it in the prescribed manner.

In practical classes, the student must be dressed in a work uniform (medical gown, hat, change of shoes, protective gown, mask). Students who do not have a work uniform are not allowed to study.

The student must follow the safety rules in practical classes and during the stay in the department.

When discussing theoretical issues, students should demonstrate tolerance, courtesy and respect for their colleagues and the teacher; when performing practical tasks, the workplace should be kept in order and cleaned after the lesson.

**Use of mobile phones and other electronic devices.** The using of mobile phones and other electronic devices in the classroom is allowed only during electronic testing or surveys.

**Academic Integrity.** During the study of the discipline the student must be guided by the Code of Academic Integrity of National Pirogov Memorial Medical University, Vinnytsia ([https://www.vnmu.edu.ua/general information / Basic documents / Code of Academic Integrity](https://www.vnmu.edu.ua/general%20information%20/%20Basic%20documents%20/%20Code%20of%20Academic%20Integrity)). In case of violation of the norms of academic integrity during the current and final controls, the student receives a grade of "2" and must work it out to his teacher in the prescribed manner within two weeks after receiving an unsatisfactory grade).

**Missed Classes.** Missed classes are practiced in the manner prescribed by Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsia (link [https://www.vnmu.edu.ua/ General information / Basic documents](https://www.vnmu.edu.ua/General%20information%20/%20Basic%20documents)) at the time determined by the schedule of works (published on the website of the department [https://www.vnmu.edu.ua/ Department of Pediatric Infectious Diseases](https://www.vnmu.edu.ua/Department%20of%20Pediatric%20Infectious%20Diseases)) to the next teacher or by agreement with his teacher. To complete the missed lesson, the student must fill out a Google registration form, a link to which is available at: [https://www.vnmu.edu.ua/ Department of Pediatric Infectious Diseases / News](https://www.vnmu.edu.ua/Department%20of%20Pediatric%20Infectious%20Diseases%20/%20News), and includes the basic necessary information on testing.

**The procedure for admission to the final control** on the discipline is given in the Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsia (link [https://www.vnmu.edu.ua/ General information / Basic documents](https://www.vnmu.edu.ua/General%20information%20/%20Basic%20documents)). Students who have not missed unfinished practical classes and received an average traditional grade of at least "3" are admitted to the final control.

**Additional individual points.** Individual points to the discipline (from 6 to 12) student can receive for individual work, the amount of which is published on the website of the department in educational materials of the discipline, the number of points is determined by the results of IRS according to the Regulations on the organization of educational process of National Pirogov Memorial Medical University, Vinnytsia (link [https://www.vnmu.edu.ua/ General information / Basic documents](https://www.vnmu.edu.ua/General%20information%20/%20Basic%20documents)).

**Conflict resolution.** In the event of misunderstandings and complaints to the teacher due to the quality of educational services, assessment of knowledge and other conflict situations, the student must first report their claims to the teacher. If the conflict issue is not resolved, the student has the right to submit an appeal to the head of the department in accordance with the Regulations on the consideration of appeals of applicants for higher education seeker in National Pirogov Memorial Medical University, Vinnytsia ([https://www.vnmu.edu.ua/ General information / Basic documents](https://www.vnmu.edu.ua/General%20information%20/%20Basic%20documents)).

**Politics in terms of distance learning.** The procedure of distance learning is regulated by the Regulations on the introduction of elements of distance learning in National Pirogov Memorial Medical University, Vinnytsia ([https://www.vnmu.edu.ua/ General information / Basic documents](https://www.vnmu.edu.ua/General%20information%20/%20Basic%20documents)). The main training platforms for training are Microsoft Teams, Google Meets. The procedure for conducting practical classes, exercises and consultations during distance learning is published on the website of the department ([https://www.vnmu.edu.ua/ Department of Pediatric Infectious Diseases / Student](https://www.vnmu.edu.ua/Department%20of%20Pediatric%20Infectious%20Diseases%20/%20Student) or [https://www.vnmu.edu.ua/ Department of Pediatric Infectious Diseases / News](https://www.vnmu.edu.ua/Department%20of%20Pediatric%20Infectious%20Diseases%20/%20News)).

**Feedback** with the teacher is carried out through messengers (Viber, Telegram, WhatsApp) or e-mail (at the choice of the teacher) during working hours.

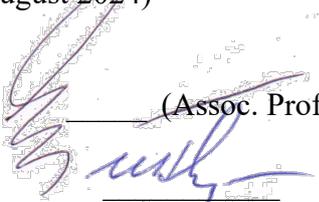
### 1. Training resources

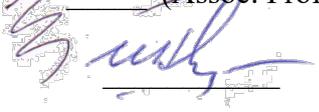
Educational and methodological support of the discipline is published on the website of the department ([https://www.vnmu.edu.ua/ Department of Pediatric Infectious Diseases Student](https://www.vnmu.edu.ua/Department%20of%20Pediatric%20Infectious%20Diseases%20/%20Student)). Consultations are held twice a week according to the consultation schedule.

### 2. Schedule and distribution of groups by teachers published on the website of the department (([https://www.vnmu.edu.ua/ Department of Pediatric Infectious Diseases Student](https://www.vnmu.edu.ua/Department%20of%20Pediatric%20Infectious%20Diseases%20/%20Student)).

### 3. Questions to the intermediate and final controls of the discipline published on the web page of the department (([https://www.vnmu.edu.ua/ Department of Pediatric Infectious Diseases / Student](https://www.vnmu.edu.ua/Department%20of%20Pediatric%20Infectious%20Diseases%20/%20Student)).

Syllabus on the subject "Immunoprophylaxis of Infectious Diseases in Children" was discussed and approved at a meeting of the Department of Pediatric Infectious Diseases (Protocol №1, from "29 " August 2024)

Responsible for the Course  (Assoc. Prof. HEI, Ph.D. Olena ONOFRIICHUK)

Head of the Department  (Prof. HEI, D.S. Iryna NEZGODA)