

# ODESA NATIONAL MEDICAL UNIVERSITY

## Medical Faculty No.1 Department of Internal Medicine No.2

### Syllabus of the elective discipline «CLINICAL ASPECTS OF IMMUNOPROPHYLAXIS»

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|---|--|
| <b>Scope of the elective discipline</b>         | Total number of hours per discipline: 90 hours, 3 credits.<br>Semester: IX - X.<br>5th year of study   |
| <b>Days, time, place of elective discipline</b> | According to the schedule of classes.<br>Auditoriums of the Department of Internal Medicine No. 2, str. Tinista, 8   |
| <b>Academics</b>                                | Honcharuk Sergiy: doctor of medicine, professor;<br>Viktoriia Osintseva: assistant   |
| <b>Contact Information</b>                      | Phone: Honcharuk Serhiy Fedorovych 067-480-61-06.<br>E-mail: Sergiy Goncharuk: goncharuks@ukr.net.<br>Online consultations: from 4:00 p.m. to 6:00 p.m. every Thursday, from 9:00 a.m. to 2:00 p.m. every Saturday. A link to an online consultation is provided to each group during classes separately |

### COMMUNICATION

Communication with applicants will be conducted in the classroom (face-to-face). During distance learning, communication is carried out through the *Microsoft Teams platform*, as well as through e-mail correspondence, Viber messengers (through groups created in Viber for each group, separately through the head of the group).

### COURSE ANNOTATION

#### ***Subject of study of the discipline***

The subject of study of the discipline "Clinical aspects of immunoprophylaxis" is modern scientific ideas regarding the formation of a specific immune response to antigens; mechanisms of formation of the primary and secondary immune response to infectious and non-infectious pathogens; assessment the patient's immune status according to basic immunolaboratory methods and principles of interpretation of immunograms; concept of individual, group, collective, population immunity; innovative methods for creating and introducing vaccines, classification of vaccines; approaches to vaccinations regulated by the Ministry of Health of Ukraine in the conditions of medical and preventive institutions; the necessity of forming individual and population immunity in providing a medical care system.

***Prerequisites and post-requisites of the discipline (the place of the discipline in the educational program):*** the educational discipline "Clinical aspects of immunoprophylaxis" is based on the study by applicants of I-V courses of such disciplines as "Medical Biology", "Normal and Pathological Physiology", "Pathomorphology", "Internal Medicine", "Pediatrics". In turn, the educational discipline "Assessment of the state of the human immune system" lays the foundations for studying such disciplines as "Family Medicine", "Physiatrics", "Infectious Diseases", "Oncology", separate topics - "Internal Medicine" and "Pediatrics".

***The purpose of the discipline*** is to form in future doctors' understanding of the immune system structure, mechanisms of immune response formation; immune-dependent pathology, functioning of the immune system in different age groups; the concept of individual and population immunity; the need for

immunoprophylactic measures; the classification of vaccines; updated recommended Immunization Schedule in Ukraine and various countries.

***The tasks of the discipline:***

1. to get acquainted with modern scientific achievements regarding ways of forming a specific immune response to antigens;
2. learn the mechanisms of formation of the primary and secondary immune response to infectious and non-infectious pathogens;
3. assess the patient's immune status according to the basic immunolaboratory methods and principles of interpretation of immunograms;
4. familiarize with the concept of individual, group, collective, population immunity;
5. familiarize with modern methods of creating vaccines and their classification;
6. familiarize yourself with the approaches to vaccinations regulated by the Ministry of Health of Ukraine in the conditions of medical and preventive institutions;
7. to form an idea about the significance of the formation of individual and population immunity in the system of providing medical care.

***Outcome results:***

After completing the study of the educational discipline "Clinical aspects of immunoprophylaxis", the applicant **should know:**

- structure and clinical physiology of the immune system;
- modern views on the formation of the immune response;
- basic methods of immunodiagnosis;
- clinical manifestations of immunodeficiency states;
- features of formation of infectious immunity;
- classification of modern vaccines;
- principles of immunoprophylaxis;
- dates of preventive vaccinations, according to the calendar of preventive vaccinations in Ukraine and various counties.

Upon completion of the discipline, the applicant **should be able to:**

- explain to patients and their relatives the need for immunoprophylactic measures;
- carry out differential diagnosis of hereditary and acquired immune disorders in various pathologies on the basis of immunological anamnesis, analysis of the genealogical tree, data of clinical and laboratory examination of patients;
- evaluate the data of general blood analysis, immunological and allergological studies, taking into account the leading mechanism of immunological disorders in the genesis of various types of immunological and allergological pathology;
- identify contraindications for immunization;
- timely detect signs of post-vaccination reactions and post-vaccination complications;
- to form a plan of post-vaccination vaccinations for the patient according to the calendar of prophylactic vaccinations in Ukraine and various counties.

## COURSE DESCRIPTION

### *Forms of training*

A total of 90 hours has been allocated to the study of the educational discipline "Clinical aspects of immunoprophylaxis", (3 ECTS credits).

The educational discipline "Clinical aspects of immunoprophylaxis", will be taught in the form of practical lessons (30 hours), independent work of students (60 hours).

During the teaching of the educational discipline "Clinical aspects of immunoprophylaxis", a variety of teaching methods will be used: dialogues in the "teacher-applicant" and "applicant-applicant" systems, preparation of essays, presentations at practical lessons.

During the teaching of the discipline, methods of problem presentation, as well as explanatory and illustrative, reproductive and heuristic methods are used.

It is planned to conduct individual and group consultations, which will be carried out through face-to-face meetings, telephone communication, use of e-mail, social networks, Microsoft Teams platforms.

### *Content of the elective discipline.*

Topic 1. Structure of the immune system and principles of functioning.

Topic 2. Patterns and features of immune response formation.

Topic 3. Immunological research methods. Basic rules for assessing immune status.

Topic 4. Immunodeficiency diseases.

Topic 5. Classification of vaccines. Recommended Immunization Schedule in Ukraine and worldwide.

Final lesson. Credit.

### *List of recommended literature (basic).*

1. Centers for Disease Control. General recommendation on immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 43 (no. RR-1):1, 1994. [PubMed].

2. Plotkin SA, Mortimer EA, Jr: Vaccines. 2nd Edition. W.B. Saunders Co, Philadelphia, 1994.

3. Educational and methodological manual "Clinical immunology": from the discipline "Clinical immunology and allergology" for students of the 5th year of the medical faculty / Dotsenko S.Ya., Rekalov D.G., Shekhovtseva T.G. [etc.]. – Zaporizhzhia, 2019. - 163 p.

4. Bazhora Y.I., Honcharuk S.F. Clinical immunology and allergology. Textbook: ed. 4th, add. // Odessa: Press - courier, 2018. - 264 p. 4. Clinical immunology and allergology: study guide (University III-IV years) /V.V. Chopyak, G.O. Potemkina, A.M. Gavrylyuk and others. - K.: Medical University "Medicine". - 2017. – 224 p.

5. Chopyak V.V., Potemkina G.O. Gavrylyuk A.M., Tolstyak Y.F., Zubchenko S.O. Modern problems of clinical immunology and allergology in therapeutic practice. - Lviv: "NeoDruk", 2020. - 219 p.

### *Electronic information recourses:*

1. [BMJ Clinical Evidence](http://clinicalevidence.bmj.com) <http://clinicalevidence.bmj.com>

2. [European Society of Cardiology](http://www.escardio.org/) <http://www.escardio.org/>

3. [Medscape from WebMD](http://www.medscape.com) <http://www.medscape.com>

4. [National Institute for Health and Clinical Excellence \(NICE\)](https://www.nice.org.uk/) <https://www.nice.org.uk/>

### *Information support:*

Electronic library of ONMedU: links to the attached methodological guides of practical lessons and independent work.

ONMedU repository: scientific journals, dissertation abstracts.

## EVALUATION

**Current control:** oral questioning, assessment of communication skills, solving situational clinical problems, assessment of activity in the classroom.

**Final control:** credit for assessing the completeness of the discipline programme with an additional oral examination.

**Assessment of current learning activities in a practical lesson:**

1. Assessment of theoretical knowledge on the topic of the lesson: methods: survey, evaluation of activity in the classroom maximum grade - 5, minimum grade - 3, unsatisfactory grade - 2.

2. Evaluation of solving clinical situational tasks:

Assessment methods: a) completeness and correctness of appointment and interpretation of laboratory and instrumental studies, c) compliance with the algorithm of differential diagnosis, d) justification of clinical diagnosis, e) drawing up a plan of emergency care plan in accordance with modern standards;

maximum grade - 5, minimum grade - 3, unsatisfactory grade - 2.

The grade for one practical session is the arithmetic mean of all components and can only have an integer value (5, 4, 3, 2), which is rounded by the statistical method.

**Criteria for current assessment during the practical lesson**

| Grade              | Assessment criteria   |
|--------------------|---|
| Excellent "5"      | The applicant is fluent in the material, takes an active part in the discussion and solution of a situational clinical problem, confidently demonstrates practical skills in interpreting clinical, laboratory and instrumental research data, expresses his/her opinion on the topic of the class, demonstrates clinical thinking.             |
| Good "4"           | The applicant has a good understanding of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills in interpreting clinical, laboratory and instrumental research data with some errors, expresses his/her opinion on the topic of the class, demonstrates clinical thinking. |
| Satisfactory "3"   | The applicant has insufficient knowledge of the material, is uncertain about participating in the discussion and solving a situational clinical problem, demonstrates practical skills in interpreting clinical, laboratory and instrumental research data with significant errors.   |
| Unsatisfactory "2" | The applicant does not know the material, does not participate in the discussion and solution of a situational clinical problem, does not demonstrate practical skills in interpreting data from clinical, laboratory and instrumental studies.   |

**Assessment of learning outcomes during the credit test**

Credit is assigned to an applicant who has completed all the tasks of the work programme of the discipline, actively participated in practical lessons and has a current average grade of at least 3.0 and has no academic debt.

**Independent work (IW) of applicants**

Applicant's independent work includes preparation for practical lessons, studying educational and scientific literature, writing abstracts and preparing presentations on the topics of practical classes. Independent work is evaluated during the current control of the topic in the corresponding session.

## **COURSE POLICIES**

### ***Policy on deadlines and retakes:***

- Unexcused absences will be made up as scheduled by the instructor on duty.
- Excused absences are made up on an individual schedule with the permission of the dean.

### ***Policy on academic integrity.***

It is obligatory to observe academic integrity by applicants, namely independent performance of all types of work, tasks, forms of control provided by the work program of this discipline;

- references to sources of information in case of using ideas, developments, statements, information;
- compliance with copyright and related rights legislation;
- providing reliable information about the results of their own educational (scientific) activities, used research methods and sources of information.

Unacceptable in educational activities for participants in the educational process are:

- the use of family or official ties to obtain a positive or higher grade during any form of control of learning outcomes or advantages in scientific work;
- use of prohibited auxiliary materials or technical means (cribs, notes, micro-headphones, smartphones, tablets, etc.) during control measures;
- passing the procedures of control of learning outcomes by fictitious persons

For violation of academic integrity, applicants may be held academically liable:

- lowering the results of the assessment of control work, assessment in the classroom, test, etc;
- repeated passing of assessment (control work, test, etc.);
- appointment of additional control measures (additional individual tasks, tests, tests, etc.);
- conducting an additional check of other works of the offender's authorship.

### ***Policies for attendance and being late***

Attendance of classroom classes (practical lessons) is a mandatory component for assessing the completeness of the discipline. For objective reasons (for example, illness, epidemic circumstances, international internships), training can take place remotely in agreement with the head of the department, dean. The completed tasks according to the thematic plan should be presented in consultation with the teacher.

Uniform: medical gown that completely covers the outerwear, or medical pajamas, cap, mask, changeable shoes.

Equipment: notebook, pen, phonendoscope.

Health status: applicants with acute infectious diseases, including respiratory diseases, are not allowed to attend the class.

All tasks provided by the program must be completed on time in accordance with the schedule.

An applicant who is late is considered to have missed the lesson for an unexcused reason, on the topic of the lesson is evaluated in additional hours of working off academic debt, while having the right to attend the lesson.

### ***Mobile devices***

Usage of telephones and computers without teacher's permission is a violation of discipline. In this case applicant does not receive a mark for the lesson and is obliged to rework such a lesson. Mobile devices may be used during online testing only.

### ***Behaviour in auditorium***

The course involves teamwork (academic group, department staff, staff of the clinical base of the department). All communication environments are friendly, creative, open to constructive criticism.

The behaviour of applicants and teachers in the classrooms should be working and calm, strictly comply with the rules established by the Regulations on Academic Integrity and Ethics of Academic Relations in Odesa National Medical University, in accordance with the Code of Academic Ethics and Relations of the University Community of Odesa National Medical University, the Regulations on the Prevention and Detection of Academic Plagiarism in the Research and Educational Work of Higher Education Applicants, Researchers and Teachers of Odesa National Medical University.