MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

Medical Faculty

Department of General and Clinical Epidemiology and Biosafety with course in Microbiology and Virology

Syllabus of course "METHODS OF DIAGNOSTIC OF ALLERGIC DISEASES"

Volume:	Total number of hours: 90 hours, 3 credits Semester: XI – XII. 6th course
Days, Time, Place:	According to the Schedule Department of General and Clinical Epidemiology and Biosafety with course in Microbiology and Virology, academic discipline "Microbiology, Virology and Immunology". Odesa, 1 Knyazivska str., rooms 1-6
Teacher(s)	Hruzesvkyi O.A., MD, Doctor of Science, full professor; Associate professors: Holovatiuk O.L., MD, PhD, Koltsova I.G., MD, PhD, Kurtova M.M., MD, PhD, Shevchuk H.Y., PhD; Assistant professors: Denysko T.V., Dubina A.V, MD, Kahliak M.D., Tabulina A.M., Tarasov Y.V., MD
Contact information	*Phone:* Shevchuk Hanna, Head of studies 093-419-96-77 Dubina Anzhela, responsible for the organizational and educational work of the department 067-428-63-43 Cheban Maya, laboratory assistant 048-753-09-81 E-mail: onmedumicrobio@onmedu.edu.ua; Offline consultations: Thursday – 14.00 - 16.00; Saturday – 9.00 - 13.00; Online consultations: Thursday – 14.00 - 16.00; Saturday – 9.00 - 13.00; The link to the online consultation is provided to each group during the classes separately.

COMMUNICATION

Communication with students will be carried out in the classroom (in person).

During distance learning, communication is carried out through the Microsoft Teams platform, Moodle, as well as through e-mail correspondence, Viber and Telegram messengers (through groups created in Telegram for each group, separately through the group head).

ANNOTATION OF THE COURSE

The subject of study of the discipline is methods of diagnostics of various allergic diseases: provocative and serological tests, molecular allergy diagnostics.

Prerequisites and post-requisites of the discipline (place of the discipline in the educational program):

Prerequisites: foreign language (for professional purposes), Latin and medical terminology, medical biology, medical and biological physics, biological and bioorganic chemistry, human anatomy,

histology, cytology and embryology, physiology, microbiology, virology and immunology, pathological physiology, pathological anatomy, clinical immunology and allergology.

Post-requisites: epidemiology, infectious diseases with pediatric infectious diseases, internal medicine other clinical disciplines.

The purpose is to master the knowledge and skills of the basic diagnostic methods in allergology.

The tasks of the discipline:

1. To teach the use of serological and provocative diagnostic methods in allergy according to modern examination protocols.
2. To teach to interpret the results of serological, including molecular diagnostics, and provocative diagnostic methods in allergology

Expected result:

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

Know:

- pathogenesis of the most common allergic diseases;
- serological and provocation methods of allergy diagnostics;
- approaches to quality assurance and reliability in allergy diagnostics;
- molecular allergy diagnostics: usefulness and necessity of its implementation;
- diagnosis of allergic rhinitis;
- diagnosis of contact dermatitis;
- diagnostics of food allergy;
- diagnosis of atopic dermatitis.

Be able:

- perform prick-test;
- interpret the results of patch testing;
- interpret the results of serological tests in allergology;
- interpret the results of molecular allergy diagnostics..

DESCRIPTION OF THE COURSE

Forms and methods of teaching

The course will be presented in the form of practical lessons (30 hours), organization of independent work of students (60 hours).

Teaching methods: conversation, explanation, discussion, discussion of the acute issues; visual methods: illustration (including multimedia presentations); testing.

The content of the discipline

Theme 1: Introduction to the immunology of allergy. Hypersensitivity. Classification of hypersensitivities by Coombs and Jell.

Theme 2. Allergens. International nomenclature of allergens.

Theme 3. Immunopathology of major allergic diseases. Allergic rhinitis.

Theme 4. Immunopathogenesis of food allergy.

Theme 5. Immunopathogenesis of atopic dermatitis.

Theme 6. Immunopathogenesis of contact dermatitis.

Theme 7. Immunopathogenesis of acute and chronic urticaria.

Theme 8: Immunopathogenesis of bronchial asthma.

Theme 9: Methods of diagnosing allergic diseases. Prick testing. Mechanism of action. Indications and contraindications.

Theme 10. Performing prick tests and interpreting the results.

Theme 11. Patch testing. Mechanism of action. Indications and contraindications. Interpretation.

Theme 12: Approaches to the serological diagnosis of allergy. Methods for the determination of IgE antibodies. Extractive and component allergy diagnostics.

Theme 13. Molecular (component) allergy diagnostics. Interpretation of results.

Theme 14: Food intolerance.
Theme 15: Algorithms for the diagnosis of allergic diseases.

List of recommended literature:
Main:

1. Abbas, A., Litchman, A. H. & Pillai, S. Basic Immunology - 6th Edition. (Elsevier Ltd, 2019).
2. Anantharyan R. Jayaram Paniker C. K. Textbook of Microbiology. 12-th Edition.- Orient Longman, 2022.
3. Male, D., Peebles, S. & Male, V. Immunology. (2020).

Additional:

1. Steering Committee Authors; Review Panel Members. A WAO - ARIA - GA²LEN consensus document on molecular-based allergy diagnosis (PAMD@): Update 2020. World Allergy Organ J. 2020 Mar 7;13(2):100091. doi: 10.1016/j.waojou.2019.100091. PMID: 32180890; PMCID: PMC7062937.
2. Matricardi PM, Kleine-Tebbe J, Hoffmann HJ, Valenta R. et al EAACI Molecular Allergology User's Guide. Pediatr Allergy Immunol. 2016 May;27 Suppl 23:1-250. doi: 10.1111/pai.12563. PMID: 27288833.
3. International nomenclature of allergens. https://allergen.org/
4. Wollenberg A. et al. Consensus-based European guidelines for treatment of atopic eczema (atopic dermatitis) in adults and children: part I. J Eur Acad Dermatol Venereol. 2018 May;32(5):657-682. doi: 10.1111/jdv.14891. Erratum in: J Eur Acad Dermatol Venereol. 2019 Jul;33(7):1436. PMID: 29676534.
5. Wollenberg A. et al. Consensus-based European guidelines for treatment of atopic eczema (atopic dermatitis) in adults and children: part II. J Eur Acad Dermatol Venereol. 2018 Jun;32(6):850-878. doi: 10.1111/jdv.14888. PMID: 29878606.
6. Bousquet J. et al. Allergic Rhinitis and Its Impact on Asthma Working Group. Next-generation Allergic Rhinitis and Its Impact on Asthma (ARIA) guidelines for allergic rhinitis based on Grading of Recommendations Assessment, Development and Evaluation (GRADE) and real-world evidence. J Allergy Clin Immunol. 2020 Jan;145(1):70-80.e3. doi: 10.1016/j.jaci.2019.06.049. Epub 2019 Oct 15. Erratum in: J Allergy Clin Immunol. 2022 Jun;149(6):2180. PMID: 31627910.

CRITERIA EVALUATION

Ongoing control: individual survey on the theme, testing, evaluation of practical skills, solving situational problems, the ability to analyze and interpret research results and correctly draw reasonable conclusions, evaluation of activity in the classroom.

Criteria of ongoing assessment at the practical class

Score	Assessment criterion
Excellent «5»	The student takes an active part in practical classes, demonstrates deep knowledge, gives complete and detailed answers to questions. Takes an active part in discussing problem situations, demonstrates good skills and abilities in performing practical tasks, correctly evaluates the results. Test tasks are completed in full.
Good «4»	The student participates in practical classes; has a good command of the material. Demonstrates the necessary knowledge, but answers questions with some mistakes; participates in the discussion of problem situations. Test tasks are completed in full, at least 70% of answers to questions are correct.
Satisfactory «3»	The student sometimes participates in practical classes; partially speaks and asks questions; makes mistakes when answering questions; shows passive work in

	practical classes. Demonstrates skills and abilities in performing practical tasks, but evaluates the results obtained insufficiently fully and accurately. Testing is completed in full, at least 50% of answers are correct, answers to open questions are not logical, with obvious significant errors in definitions.
Unsatisfactory «2»	The student does not participate in the practical lesson, is only an observer; never speaks and does not ask questions, is not interested in learning the material; gives incorrect answers to questions, demonstrates insufficient skills and abilities, cannot cope with practical work and evaluation of the results. Testing is not completed.

Final control: Credit is given to an applicant who has completed all the tasks of the work program of the discipline, actively participated in seminars and has an average current grade of at least 3.0 and has no academic debt.

Possibility and conditions for receiving additional (bonus) points: not provided.

INDEPENDENT WORK OF STUDENTS

Independent work involves preparation for each seminar, independent study of a certain list of topics or topics that require in-depth study. Questions on topics assigned for independent study are included in the control measures.

COURSE POLICY

Policy on deadlines and retakes:

- Unexcused absences will be made up as scheduled by the teachers 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 students, 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, phones, smartphones, tablets, etc.) during control assessments;
- passing the procedures for controlling the results of training by fictitious persons.

For violation of academic integrity, students may be brought to such academic responsibility:

- 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 assessments (additional individual tasks, control works, tests, etc.);
- conducting an additional check of other works of the offender's authorship.

Policy on attendance and lateness:

Uniform: medical gown that completely covers the outer clothing, or medical pajamas, cap, mask, change of shoes.

Equipment: notebook, pen.

Health status: students with acute infectious diseases, including respiratory diseases, are not allowed to attend classes.

Lateness to classes is not allowed. A student who is late for the lesson may attend it, but if the teacher has put "ab" in the register, they must made it up in the general order.

Use of mobile devices:

The use of any mobile devices is prohibited. In case of violation of this paragraph, the student must leave the class and the teacher puts "ab" in the register, which they must made out up the general order.

Mobile devices can be used by students with the permission of the teacher if they are needed to complete the task.

Behaviour in the classroom:

The behavior of students and teachers in the classroom must be working and calm, strictly comply with the rules established by the Regulations on Academic Integrity and Ethics of Academic Relations at 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 Students, Researchers and Teachers of Odesa National Medical University.