

**MINISTRY OF HEALTH OF UKRAINE  
ODESA NATIONAL MEDICAL UNIVERSITY  
Medical, international faculties  
Department of OTORHINOLARYNGOLOGY  
Syllabus of the elective discipline**

**" ALLERGIC LESIONS OF UPPER RESPIRATORY TRACT AND EAR "**

<b>Scope of the academic discipline</b>	Total number of hours per discipline: 90 hours, 3 credits. Semesters: XI - XII. 6th year of study.
<b>Days, time, place of educational discipline</b>	According to the schedule of classes. Department of Otorhinolaryngology Base of KIE "ODKH" ODC, 26, str. Akademik Zabolotny, 9th floor. Base of the University Clinic, st. Tinista, 8, basement.
<b>Professors</b>	Serhii Mykhailovych Pukhlik, Head of the Department, PhD, Professor. Yevchev Fedir Dmytrovych, PhD, Professor. Associate professors: Bohdanov Kyrylo Georgiyovych, PhD. Olga Valentynivna Titarenko, PhD. Dedykova Iryna Volodymyrivna PhD, Shchelkunov Anatoly Petrovych, PhD. Assistants: Ph.D. Iryna Kimivna Tagunova, PhD. Inna Eduardivna Chernysheva, PhD. Iryna Volodymyrivna Dobronravova, , PhD. Oleksandr Viktorovych Andreev, PhD. Volodymyr Volodymyrovych Kolesnichenko, PhD Yevcheva Angelina Fedorivna, PhD Bogdanov Viktor Kirilovich.
<b>Contact Information</b>	Help by phone: Olga Valentynivna Titarenko, head of the study 096-531-71-33, (048) 736-22-30 Valentina Sergienko, laboratory technician 098-454-38-80, (048) 736-22-30 E-mail: olga.titarenko@onmedu.edu.ua Consultations: from 2:00 p.m. to 5:00 p.m. every Wednesday, from 9:00 a.m. to 2:00 p.m. every Saturday Online consultations: from 4:00 p.m. to 6:00 p.m. every Wednesday, from 9:00 a.m. to 2:00 p.m. every Saturday. The link to the online consultation is provided to each group during classes separately.

### **COMMUNICATION**

Communication with students will be conducted in the classroom (face-to-face).

During online education communication is carried out through the Microsoft Teams platform, as well as through e-mail, Telegram, Viber messengers (through the groups they have created for each group, separately through the head of the group).

### **ABSTRACT OF THE EDUCATIONAL DISCIPLINE**

*The subject of study*- - methods of research of the upper respiratory tract and ear, etiology, pathogenesis, general and specific diagnosis of allergic diseases of the upper respiratory tract and ear, methods of treatment and rehabilitation.

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

*Prerequisites*: Latin language and medical terminology, medical biology, medical and biological physics, biological and bioorganic chemistry, human anatomy, histology, cytology and embryology, physiology, microbiology, virology and immunology, life safety; basics of bioethics

and biosafety, pathomorphology, pathophysiology, pharmacology, propaedeutics of pediatrics, medical psychology, ophthalmology, neurology, psychiatry, narcology, dermatology, venereology, allergology.

*Postrequisites:* pediatrics, internal medicine, surgery, obstetrics and gynecology, infectious diseases, epidemiology and principles of evidence-based medicine, oncology and radiation medicine, traumatology and orthopedics, phthisiology, anesthesiology and intensive care, emergency and urgent medical care, hygiene and ecology, palliative and hospice medicine, general practice (family medicine).

*The aim of the discipline:* acquisition by the learner of additional knowledge and mastery of professional competences and skills of observation and management of patients with allergic pathology of the upper respiratory tract and ear; communication skills, taking into account the characteristics of a family doctor's communication with a healthy and sick person.

*Tasks of the discipline:*

1. Formation of skills and communication skills with patients with allergic pathology of the upper respiratory tract and ears.
2. Formation of skills and communication skills with the patient with allergic diseases of the upper respiratory tract and ear.
3. Improving the skills of substantiation of clinical diagnosis, differential diagnosis, drawing up a plan of instrumental research with allergic diseases of the upper respiratory tract and ear.
4. Mastering the ability to determine the tactics of rehabilitation, management, treatment and prevention with allergic diseases of the upper respiratory tract and ear.

*Expected results:*

As a result of studying the academic discipline, the applicant must:

*Know:* modern concepts of theoretical and practical otorhinolaryngology and allergology; classification, clinical manifestations, complications of allergic diseases of the upper respiratory tract and ear; measures for conservative and specific treatment of allergic diseases of the upper respiratory tract and ear; surgical treatment of emergency conditions in allergic diseases of the upper respiratory tract and ear; general issues of allergology, features of a specific allergological examination of a patient with allergic diseases of the upper respiratory tract and ear; features of the structure of the medical card of a patient with allergic diseases of the upper respiratory tract and ear.

*Be able to:* conduct anamnesis collection and an objective examination of the ENT of a patient with allergic pathology; diagnose and provide first aid for allergic diseases of the upper respiratory tract and ear; choose the tactics of managing a patient with allergic diseases of the upper respiratory tract and ears depending on the severity of the allergic condition and comorbid conditions; to diagnose various inflammatory and non-inflammatory processes in allergic diseases of the upper respiratory tract and ear, to carry out differential diagnosis between them; choose appropriate combined treatment tactics to avoid complications; draw up a patient's card for allergic diseases of the upper respiratory tract and ears.

## **Content of the academic discipline**

### **Content module 1. Basics of allergology. Research methods for allergic diseases of the upper respiratory tract and ear.**

*Topic 1. Mechanisms of development of allergic reactions. Types of allergic reactions. Allergy mediators.* Students acquire practical skills: use of a forehead reflector, forehead illuminator and conduct of otoscopy, anterior rhinoscopy, epi-, meso- and hypopharyngoscopy, indirect laryngoscopy, examination of the patency of the auditory tube, determination of hearing acuity, determination of respiratory and olfactory functions of the nose, taking swabs from the nose, pharynx for bacteriological and cytological examination. General clinical, instrumental and

radiation research methods. Fibroscopy and endoscopy of the external auditory canal, nose, paranasal sinuses and nasopharynx, pharynx, larynx, larynx.

**Topic 2. Allergens and factors contributing to the development of allergies.** Endoallergens and exoallergens. Non-infectious allergens: pollen, household, food, epidermal, insect, medicinal, industrial. Infectious allergens: bacterial, viral, fungal, helminth allergens. Stages of realization of genetic predisposition. Environmental factors.

**Topic 3. Methods of research of the ear, nose, paranasal sinuses, pharynx, larynx, trachea. Endoscopic methods of research of ENT organs.** Students acquire practical skills: use of a forehead reflector, forehead illuminator and conduct of otoscopy, anterior rhinoscopy, epi-, meso- and hypopharyngoscopy, indirect laryngoscopy, examination of the patency of the auditory tube, determination of hearing acuity, determination of respiratory and olfactory functions of the nose, taking swabs from the nose, pharynx for bacteriological and cytological examination.

General clinical, instrumental and radiation research methods. Fibroscopy and endoscopy of the external auditory canal, nose, paranasal sinuses and nasopharynx, pharynx, larynx, larynx.

**Topic 4. Semiotics, general laboratory and specific allergy diagnosis of allergic diseases of the upper respiratory tract and ear.** Allergological anamnesis collection. Clinical and laboratory research. Allergological skin tests: skin, scarification, prick test, intradermal. Indications and contraindications for skin tests. Provocation tests: nasal, inhalation, sublingual, elimination, leukocytopenic. Immuno-laboratory examination: radioallergosorbent, immunoenzymatic analysis for the determination of specific immunoglobulin E, molecular ALEX test.

### **Content module 2. Principles of treatment of allergic diseases of the upper respiratory tract and ear.**

**Topic 5. Elimination of allergens.** Elimination of contact with causative allergens. Hygiene of the environment, home and patient. Patient education. Vacation planning. Use of acaricides. Nasal shower.

**Topic 6. Pharmacotherapy of allergic diseases of the upper respiratory tract and ear.** Groups of antiallergic drugs. Mechanisms of action. Local and systemic antiallergic agents. Side effects. Gradual approach of pharmacotherapy. The choice of treatment tactics depends on the symptoms, degree of severity, comorbid conditions and complications of the allergic disease. Combined pharmacotherapy.

**Topic 7. Specific immunotherapy of allergic diseases of the upper respiratory tract and ear.** Mechanisms of action of specific immunotherapy. Methods of use. Indication. Restrictions and contraindications. Pre-season, seasonal, year-round SIT. Methods and conditions of accelerated SIT. Methods of introducing therapeutic allergens. General and local adverse reactions. Expected results and their control.

### **Content module 3. Allergological diseases of the upper respiratory tract and ears.**

**Topic 8. Atopic dermatitis of the skin of the external auditory canal.** Clinical and pathogenetic variants of atopic dermatitis of the skin of the external auditory canal. Trigger factors. Histaminoliberators. Mandatory and additional diagnostic criteria. Laboratory tests. Differential diagnosis with skin manifestations of infection, diseases of the immune system, metabolic disorders, syndromes similar to dermatoses. Staged treatment. Rules for skin care of the external auditory canal. Prevention of exacerbations.

**Topic 9. Allergic nasopharyngitis. Secretory otitis.** Stages and mechanism of development of allergic nasopharyngitis. Modern diagnostic algorithm. Endoscopic signs. Elimination measures. Gradual use of pathogenetically determined pharmacotherapy. Age characteristics of specific allergy diagnosis and immunotherapy of allergic nasopharyngitis. Pathophysiology and clinical course of secretory otitis. Diagnostic criteria. Conservative methods of treatment of secretory otitis against the background of allergic diseases of the upper respiratory tract. Surgical varnishing of secretory otitis. Forecast. Forecast.

**Topic 10. Allergic rhinitis. Classification. Complication. Treatment and pharmacological control.** Causes of intermittent and persistent allergic rhinitis. Mechanism of development and stage. Classification by type of reaction, morphological changes, clinical course, duration of allergen exposure, depending on symptoms and severity. Clinical symptoms and functional disorders depending on the biochemical mediator. Typical symptoms. Diagnostic criteria. Allergodiagnosis. Differential diagnosis between seasonal and year-round allergic rhinitis. Differential diagnosis between allergic, infectious and vasomotor rhinitis. Complications: nonspecific polysensitization, polyallergy, polypous rhinosinusitis, bronchial asthma. Elimination measures. Principles of pharmacotherapy. Allergen-specific therapy. Treatment prospects.

**Topic 11. Chronic rhinosinusitis with polyps.** Multifactorial, allergic, infectious-allergic, autoimmune theories of etiopathogenesis of polypous rhinosinusitis. Systemic, recurrent genetically determined polyps, chronic polyposis-purulent rhinosinusitis (neutrophil polyps), local pathology in the osteomeatal complex (antrochoanal polyp), chronic infectious-allergic rhinosinusitis, aspirin-induced nasal polyps. Edema eosinophilic nasal polyp. Fibro-inflammatory polyp. Glandular polyp. Polyp with atypical stroma. Stammberger's classification. Obligatory and additional methods of diagnosis of polyposis rhinosinusitis. Medical and surgical treatment.

**Topic 12. Aspirin triad.** The theory of pathogenesis. Manifestations and clinical course. Signs and diagnosis. Peculiarities of diet and pharmacological control. Aspirin desensitization. Indications for surgical treatment. Forecast.

**Topic 13. Pseudoallergic conditions in ENT practice.** Syndrome of low tolerance to histamine. Caused by a decrease in the activity of diamine oxidase. Clinical manifestations. Differential diagnosis. Features of the diet. Treatment. Mechanisms of sensitization in parasitic infections. Clinical manifestations of parasitic sensitization of the upper respiratory tract. Differential diagnosis. Tactics of treatment.

#### **Content module 4. Emergency conditions in allergic diseases of the upper respiratory tract and ear.**

**Topic 14. Angioedema of the larynx.** Etiopathogenesis of Quincke's edema of the larynx. Reasons. Diagnostic criteria. Stages of laryngeal stenosis. Acquired and hereditary bradykinin-induced laryngeal angioedema. Typical hereditary bradykinin-induced angioedema of the larynx. Features of diagnosis and course. Short-term prevention. Long-term prevention. Emergency aid. Medical stenosis. Treatment tactics of the 3rd and 4th stages of stenosis in a modern aspect. Conicotomy. Criconicotomy. Tracheostomy.

**Topic 15. Drug allergy in otorhinolaryngology. Lyell's syndrome. Anaphylactic shock.** Classification of side effects of drugs. Stages of drug allergy development. Concept of metabolic biotransformation of drugs. Risk factors of drug allergy. Clinical classification of allergic reactions to drugs. Diagnosis of drug allergy. Prevention of drug allergy. Lyell's syndrome: clinical picture, differential diagnosis, treatment. Pathophysiological mechanisms of anaphylactic shock. Mechanisms of degranulation of basophils. Clinical picture of anaphylactic shock. Treatment.

**Credit.** It is evaluated on a two-point scale: the grade "credited" is given to a higher education applicant who has completed the curriculum of the discipline, has no academic debt; the level of competence is high (creative); the grade "failed" is given to a student of higher education who has not completed the curriculum of the discipline, has academic debt (average grade below 3.0 and/or missed classes); the level of competence is low (receptive-productive).

### Recommended literature

#### Basic:

1. Y.Mitin, Y.Deyeva, Y.Gomza, V. Didkovskiy etc. Otorhinolaryngology// Medicine, 2018. – 264p.
2. Eguluz-Gracia I., Testera-Montes A., Gonzalez M., Perez-Sanchez N., Arisa A., Salas M. et al. Safety and reproducibility of nasal allergen provocation. Allergy. (2019) 74:1125–34. doi: 10.1111/vse.13728
3. Fokkens WJ, Lund VJ, Hopkins C, Hellings PW, Kern R, Reitsma S. European position on rhinosinusitis and nasal polyps. Rhinology. (2020) 58 (Suppl. S29): 1–464. doi: 10.4193/Rhin20.600

#### Additional:

4. P.W.Flint, B.H.Haughey, V.J.Lund, K.T.Robbins, J.R.Thomas, M.M.Lesperance, H.W.Francis. Cummings Otolaryngology: Head and Neck Surgery // Format Hardback, 2020. – 3568
5. Z.Mu, J.Fang. Practical Otorhinolaryngology, Head and Neck Surgery: Diagnosis and Treatment// Hardback, 2020. - 314 p.
6. Hossenbakkus L., Linton S., Harvey S., Ellis A.K. On the way to the final treatment of allergic rhinitis: the best use of new and proven treatment methods. Allergy Asthma KlinImmunol. (2020) 16:1–17. doi: 10.1186/s13223-020-00436-y
7. Du K, Qing H, Zheng M, Wang X, Zhang L. Intranasal antihistamines are superior to oral H1 antihistamines as adjunctive therapy to intranasal corticosteroids for the treatment of allergic rhinitis. Ann Allergy Asthma Immunol. (2020) 125: 589–96.e3. doi: 10.1016/j.anai.2020.06.038
8. Seresirikachorn K, Chitsuthipakorn W, Kanjanawasee D, Khattiyawittayakun L, Snidvongs K. Adding a leukotriene receptor antagonist to H1 antihistamines is effective for the treatment of allergic rhinitis: a systematic review and metaanalysis. Am J RhinolAllerg. (2019) 33: 591–600. DOI: 10.1177/1945892419844459

### 13. Electronic information resources

1. World Health Organization. URL: [www.who.int/ru/index.html](http://www.who.int/ru/index.html).
2. European Regional Office of the World Health Organization. URL: [www.euro.who.int](http://www.euro.who.int).
3. [www.ama-assn.org](http://www.ama-assn.org) – [American Medical Association](http://www.ama-assn.org)
4. [www.dec.gov.ua/mtd/home/](http://www.dec.gov.ua/mtd/home/) - [State Expert Center of the Ministry of Health of Ukraine](http://www.dec.gov.ua/mtd/home/)
5. <http://bma.org.uk>– [British Medical Association](http://bma.org.uk)
6. [www.gmc-uk.org](http://www.gmc-uk.org)- [General Medical Council \(GMC\)](http://www.gmc-uk.org)
7. [www.bundesaerztekammer.de](http://www.bundesaerztekammer.de) – [German Medical Association](http://www.bundesaerztekammer.de)

### EVALUATION

**Ongoing control:** oral survey, testing, assessment of class activity.

#### Criteria of ongoing assessment at the practical class

Score	Assessment criterion
Excellent «5»	The student is fluent in 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 class,

	demonstrates clinical thinking.
Good «4»	The student 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 topic of the class, demonstrates clinical thinking.
Satisfactory «3»	The student does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution 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 student 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.

The student is admitted to the Credit on the condition that the requirements of the educational program are met and if he received at least 3.00 points for the current educational activity .

### **INDEPENDENT WORK OF STUDENTS**

Independent work involves preparation for each practical lesson.

#### **Educational discipline policy**

*Deadlines and rescheduling policy:*

- absences of classes for non-respectable reasons are worked out according to the schedule of the teacher on duty.
- absences due to valid reasons are processed according to an individual schedule with the permission of the dean's office.

*Academic integrity policy:*

applicants must observe academic integrity, namely:

- independent performance of all types of work, tasks, forms of control provided for by the work program of this educational discipline;
- references to sources of information in the case of using ideas, developments, statements, information;
- compliance with the legislation on copyright and related rights;
- provision of reliable information about the results of one's own educational (scientific) activity, used research methods and sources of information.

unacceptable in educational activities for participants of the educational process are:

- using family or official ties to obtain a positive or higher grade during any form of control of learning outcomes or academic performance;
- use of prohibited auxiliary materials or technical means (cheat sheets, notes, micro-earphones, telephones, smartphones, tablets, etc.) during control measures;
- passing procedures for control of training results by fake persons.

for violation of academic integrity, students may be held to the following academic responsibility:

- a decrease in the results of assessment of control work, assessment in class, credit, etc.;
- retaking the assessment (control work, credit, etc.);
- appointment of additional control measures (additional individual tasks, control works, tests, etc.);
- conducting an additional inspection of other works authored by the violator.

*Attendance and tardiness policy:*

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

Equipment: notebook, pen,.

Health: applicants suffering from acute infectious diseases, including respiratory diseases, are not allowed to attend classes.

Student who is late for class can attend it, but if the teacher has put "nb" in the journal, he must work it out in the general order.

*Use of mobile devices:*

mobile devices may be used by students with the permission of the teacher if they are needed for the task.

*Behavior in the audience:*

The behavior of applicants and teachers in the classrooms must be working and calm, strictly comply with the rules established by the regulations on academic integrity and ethics of academic relations at Odessa national medical university, in accordance with the code of academic ethics and university community relations of Odessa national medical university, regulations on prevention and detection of academic plagiarism in the research and educational work of higher education applicants, scientists and teachers of Odessa national medical university

#### ***Інформаційні ресурси***

8. <http://moz.gov.ua> – Міністерство охорони здоров'я України
9. [www.ama-assn.org](http://www.ama-assn.org) – Американська медична асоціація / American Medical Association
10. [www.who.int](http://www.who.int) – Всесвітня організація охорони здоров'я
11. [www.dec.gov.ua/mtd/home/](http://www.dec.gov.ua/mtd/home/) - Державний експертний центр МОЗ України
12. <http://bma.org.uk> – Британська медична асоціація
13. [www.gmc-uk.org](http://www.gmc-uk.org) - General Medical Council (GMC)
14. [www.bundesaerztekammer.de](http://www.bundesaerztekammer.de) – Німецька медична асоціація