

MINISTRY OF HEALTH PROTECTION OF UKRAINE

ODESSA NATIONAL MEDICAL UNIVERSITY

Department of Otorhinolaryngology



Vice-rector for scientific and pedagogical work

Eduard BURYACHKIVSKY

September 1st, 2024

WORKING PROGRAM OF ELECTIVE DISCIPLINE

« ALLERGIC LESIONS OF UPPER RESPIRATORY TRACT AND EAR»

Level of higher education: second (master's degree)

Field of knowledge: 22 "Health care"

Specialty: 221 "Dentistry"

Educational and professional program : Dentistry

2024

The work program is compiled on the basis of the educational and professional program "Medicine" for the training of specialists of the second (master's) level of higher education in the specialty 221 "Dentistry" of the field of knowledge 22 "Health care", approved by the Scientific Council of ONMedU (protocol No. 10 of June 27, 2024).

Developers:

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The work program was approved at the meeting of the Department of Otorhinolaryngology
Protocol No. 1 dated 28.08, 2024.

Head of the Department _____ Serhii Pukhlik

Agreed with the Guarantor of the EPP _____ Anatoliy Guluk

Approved by the Subject-cycle Methodical Commission for Dentistry Disciplines of ONMedU
Protocol No. 1 . 30.08 , 2024.

Head of the Subject-cycle Methodical Commission for Surgical Disciplines of ONMedU

Volodimir Kriklyas

Reviewed and Approved at a Meeting of the Department
Protocol No. ___ of "___" ___ 20__

Head of the Department _____
(Signature) (First Name Surname)

Reviewed and Approved at a Meeting of the Department
Protocol No. ___ of "___" ___ 20__

Head of the Department _____
(Signature) (First Name Surname)

1. Description of the academic discipline :

| Name of indicators | Field of knowledge, specialty, specialization, level of higher education | Characteristics of the academic discipline |
|--------------------|--------------------------------------------------------------------------|----------------------------------------------------------|
| Total number: | Discipline 22 "Health care" | <i>Full-time education</i> <i>Elective discipline</i> |
| Credits: 3 | | <i>Year of training: 4</i> |
| Hours: 90 | Specialty 221 " Dentistry " | <i>Semesters VII-XIII</i> |
| | | <i>Lectures (0 hours)</i> |
| Content modules: 1 | Level of higher education second (master's) | <i>Seminars (0 hours)</i> |
| | | <i>Practical (30 hours)</i> |
| | | <i>Laboratory (0 hours)</i> |
| | | <i>Independent work (60 hours)</i> |
| | | <i>including individual tasks (0 hours)</i> |
| | | <i>Form of final control - test</i> |

2. The purpose and tasks of the educational discipline, competencies, program learning outcomes

Purpose: Acquisition by the student of higher education of knowledge and formation of elements of professional competences in the field of modern methods of hearing research and hearing prosthesis and improvement of skills and competences acquired during the study of previous disciplines.

Task:

1. Formation of skills and abilities: from differential diagnosis, the allergic lesions of upper respiratory tract and ear.
2. Improving the skills of substantiating a clinical diagnosis, drawing up a plan for laboratory and instrumental research,
3. Mastering the ability to determine the tactics of emergency care, treatment and rehabilitation of the allergic lesions of upper respiratory tract and ear.

The process of studying the discipline is aimed at forming elements of following competencies:

Integral competence (level 7) according to the requirements of the NRC

The ability to solve typical and complex specialized tasks and problems in the field of health care in the specialty "Dentistry", in professional activities or in the learning process, which involves conducting research and/or implementing innovations and is characterized by the complexity and uncertainty of conditions and requirements

General competences according to the requirements of the NRK

GC 1. Ability to abstract thinking, analysis and synthesis.

GC 2. Knowledge and understanding of the subject area and understanding of professional activity.

GC 3. Ability to apply knowledge in practical activities.

GC 4. Ability to communicate in the national language both orally and in writing.

GC 9. Ability to identify, pose and solve problems.

GC 13. The ability to act socially responsibly and consciously.

Special (professional, subject) competences

SC1. Ability to collect medical information about the patient and analyze clinical data.

SC 2. The ability to interpret the results of laboratory and instrumental research.

SKC3. Ability to diagnose: determine preliminary, clinical, final, accompanying diagnosis, emergency conditions.

SC4. The ability to plan and carry out measures for the prevention of diseases of the organs and tissues of the oral cavity and maxillofacial region.

SC5. Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of diseases of the organs and tissues of the oral cavity and maxillofacial region.

SC6. The ability to determine a rational regimen of work, rest, and diet in patients in the treatment of diseases of the organs and tissues of the oral cavity and maxillofacial region.

SC7. The ability to determine the management tactics of patients with diseases of the organs and tissues of the oral cavity and maxillofacial region with accompanying somatic diseases.

SC8. Ability to perform medical and dental manipulations.

SC9. The ability to treat the main diseases of the organs and tissues of the oral cavity and maxillofacial area.

SC11. Ability to determine tactics, methods and provision of emergency medical assistance.

SC12. Ability to organize and conduct a screening examination in dentistry.

SC14. Ability to maintain regulatory medical documentation.

SC16. Ability to organize and carry out rehabilitation measures and care for patients with diseases of the oral cavity and ASHL.

Program learning outcomes (PNR)

PLO 1. Identify and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using the previous data of the patient's history, the data of the patient's examination, knowledge about the person, his organs and systems, establish a probable nosological or syndromic preliminary clinical diagnosis of a dental disease (according to list 2)

PLO 2. Collect information about the patient's general condition, evaluate the patient's psychomotor and physical development, the condition of the maxillofacial organs, based on the results of laboratory and instrumental studies, evaluate information about the diagnosis (according to list 5).

PLO 3. Prescribe and analyze additional (mandatory and optional) examination methods (laboratory, X-ray, functional and/or instrumental) according to list 5, of patients with diseases of the organs and tissues of the oral cavity and maxillofacial region for differential diagnosis of diseases (according to list 2).

PLO 4. Determine the final clinical diagnosis in compliance with the relevant ethical and legal norms, by making a reasoned decision and logical analysis of the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis under the control of the head physician in the conditions of a medical institution (according to the list 2.1).

PLO 5. Establish a diagnosis of urgent conditions under any circumstances (at home, on the street, in a medical institution), in conditions of emergency, martial law, lack of information and limited time (according to list 4) PRN

8. Determine the approach, plan, type and the principle of treatment of dental disease (according to list 2) by making an informed decision according to existing algorithms and standard schemes.

PLO 10. Determine the tactics of managing a dental patient with somatic pathology (according to list 3) by making a reasoned decision according to existing algorithms and standard schemes.

PLO 13. Determine the tactics of providing emergency medical aid, using the recommended algorithms, under any circumstances based on the diagnosis of an emergency condition in limited time (according to list 4).

PLO 21. Perform medical manipulations on the basis of a preliminary and/or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 6).

PLO 23. To perform emergency medical care manipulations using standard schemes, under any circumstances based on the diagnosis of an emergency (according to list 4) in conditions of limited time (according to lists 6, 7).

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

Know: Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention of allergic diseases of the upper respiratory tract and ear.

Be able:

- Communicate with patients, collect complaints, life anamnesis and diseases.
- Assess the state of the ENT organs in normal conditions and in various types of allergic pathology.
- Conduct clinical examination of ENT patients with allergic pathology according to standard methods.
- Analyze the results of laboratory, functional and instrumental research.
- Carry out differential diagnosis and substantiate the clinical diagnosis.
- Determine tactics and provide emergency medical care in emergency situations.
- To determine the nature and principles of providing assistance to patients on the basis of a preliminary clinical diagnosis, observing relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
- Keep medical documentation in case of hearing impairment.

3. The content of the educational 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,

generallaboratoryandspecificallergydiagnosisofallergicdiseasesoftheupperrespiratorytractandear. Allergologicalanamnesiscollection. Clinicalandlaboratoryresearch. Allergologicalskintests: skin, scarification, pricktest, intradermal. Indicationsandcontraindicationsforskintests. Provocationtests: nasal, inhalation, sublingual, elimination, leukocytopenic. Immuno-laboratoryexamination: radioallergosorbent, immunoenzymaticanalysisforthedeterminationofspecificimmunoglobulin 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 vanishing of secretory otitis. 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).

4. The structure of the educational discipline

| Topic | Hours | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------|----------|-----------|------------|-----|
| | Total | including | | | | |
| | | lectures | Seminars | Practical | Laboratory | ISW |
| 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. | | 0 | 0 | 2 | 0 | |
| Topic 2. Allergens and factors contributing to the development of allergies. | 6 | 0 | 0 | 2 | 0 | 4 |
| Topic 3. Methods of research of the ear, nose, paranasal sinuses, pharynx, larynx, trachea. Endoscopic methods of research of ENT organs. | 6 | 0 | 0 | 2 | 0 | 4 |
| Topic 4. Semiotics, general laboratory and specific allergy diagnosis of allergic diseases of the upper respiratory tract and ear. | 6 | 0 | 0 | 2 | 0 | 4 |
| Content module 2. Principles of treatment of allergic diseases of the upper respiratory tract and ear. | | | | | | |
| Topic 5. Elimination of allergens. | | 0 | 0 | 2 | 0 | |
| Topic 6. Pharmacotherapy of allergic diseases of the upper respiratory tract and ear. | 6 | 0 | 0 | 2 | 0 | 4 |
| Topic 7. Specific immunotherapy of allergic diseases of the upper respiratory tract and ear. | 6 | 0 | 0 | 2 | 0 | 4 |
| Content module 3. Allergological diseases of the upper respiratory tract and ears. | | | | | | |
| Topic 8. Atopic dermatitis of the skin of the external auditory canal. | | 0 | 0 | 2 | 0 | |
| Topic 9. Allergic nasopharyngitis. Secretory otitis. | 6 | 0 | 0 | 2 | 0 | 4 |
| Topic 10. Allergic rhinitis. Classification. Complication. Treatment and pharmacological control. | 6 | 0 | 0 | 2 | 0 | 4 |
| Topic 11. Chronic rhinosinusitis with polyps. | 6 | 0 | 0 | 2 | 0 | 4 |
| Topic 12. Aspirin triad. | 6 | 0 | 0 | 2 | 0 | 4 |
| Topic 13. Pseudoallergic conditions in ENT practice. | 6 | 0 | 0 | 2 | 0 | 4 |
| Content module 4. Emergency conditions in allergic diseases of the upper respiratory tract and ear. | | | | | | |
| Topic 14. Angioedema of the larynx. | | 0 | 0 | 2 | 0 | |
| Topic 15. Drug allergy in otorhinolaryngology. Lyell's syndrome. Anaphylactic shock. | 6 | 0 | 0 | 2 | 0 | 4 |
| Credit | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Individual task</i> | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 6 | 0 | 0 | 30 | 0 | 60 |

5. Themes of lectures / seminars / practical classes/ laboratories

5.1. Themes of lectures -lectures are not provided

5.2. Themes of seminars-Seminars are not provided.

5.3. Themes of practical classes

| № | TOPIC | Hours |
|----|----------------------------------------------------------------------------------------------------------------------------------|-------|
| 1. | Mechanisms of development of allergic reactions. Types of allergic reactions. Allergy mediators. | 2 |
| 2. | Allergens and factors contributing to the development of allergies. | 2 |
| 3 | Methods of research of the ear, nose, paranasal sinuses, pharynx, larynx, trachea. Endoscopic methods of research of ENT organs. | 2 |
| 4 | Semiotics, general laboratory and specific allergy diagnosis of allergic diseases of the upper respiratory tract and ear. | 2 |
| 5 | Topic 5. Elimination of allergens. | 2 |
| 6 | Pharmacotherapy of allergic diseases of the upper respiratory tract and ear. | 2 |
| 7 | Specific immunotherapy of allergic diseases of the upper respiratory tract and ear. | 2 |
| 8 | Atopic dermatitis of the skin of the external auditory canal. | 2 |
| 9 | Allergic nasopharyngitis. Secretory otitis. | 2 |
| 10 | Allergic rhinitis. Classification. Complication. Treatment and pharmacological control. | 2 |
| 11 | Chronic rhinosinusitis with polyps. | 2 |
| 12 | Aspirin triad. | 2 |
| 13 | Pseudoallergic conditions in ENT practice. | 2 |
| 14 | Angioedema of the larynx. | 2 |
| 15 | Drug allergy in otorhinolaryngology. Lyell's syndrome. Anaphylactic shock. | 2 |
| | Total hours | |

5.4. Themes of laboratories Laboratories are not provided.

6. Independent work of the student

| No. | Topic | Hours |
|-----|-----------------------------------------------|-----------|
| 1. | Topic 1-15. Preparation for practical classes | 4 |
| | Total | 60 |

7. Teaching methods

Practical classes: conversation, solving clinical situational problems, practicing patient examination skills, practicing skills, instructing and practicing skills on simulation dummies, training exercises on differential diagnosis of the allergic lesions of upper respiratory tract and ear.

Independent work: independent work with recommended basic and additional literature, with electronic information resources, independent mastering of allergic lesions of upper respiratory tract and ear.

8. Forms of control and assessment methods

(including criteria for evaluating learning outcomes)

Current control: oral survey, testing, assessment of class activity.

Final control: 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).

Evaluation of the current educational activity in a practical session:

1. Evaluation of theoretical knowledge on the subject of the lesson:

- methods: survey, solving a situational clinical problem
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.

The grade for one practical lesson is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

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 differentiated assessment 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.

9. Distribution of points, obtained by the student

The grade for the discipline consists of 50% of the grade for the current academic performance.

The average grade in the discipline is converted to the national grade and converted to points on a multi-point scale (200-point scale).

Conversion of traditional assessment into 200-point is carried out by the information and technical department of ONMedU by the special program by the formula:

$$\text{Average score (current academic performance)} \times 40.$$

Conversion table of traditional to multi-point

| National score for the discipline | The sum of scores for the discipline |
|-----------------------------------|--------------------------------------|
| Excellent («5») | 185 – 200 |
| Good («4») | 151 – 184 |
| Satisfactory («3») | 120 – 150 |
| Unsatisfactory («2») | Less than 120 |

According to the ECTS rating scale, students' achievements in educational discipline, who study on the same course of one specialty, according to their scores, are assessed by means of rank, namely:

Conversion of the traditional evaluation and ECTS scores

| Score on the ECTS scale | Statistical indicator |
|-------------------------|-----------------------|
| A | The best 10% students |
| B | Next 25% students |
| C | Next 30% students |
| D | Next 25% students |
| E | Next 10% students |

10. Methodological support

- Working program in the discipline
- Syllabus
- Methodological recommendations for the practical classes in the discipline
- Methodological recommendations for the individual work of students
- Multimedia presentations
- Situational tasks (including calculation)

Educational and methodical literature:

1. Ilaria Puxeddu, Paola Migliorini. Immune Rebalancing, 2016
2. Umit Sahiner, Cezmi A. Akdis. Allergy Essentials (Second Edition), 2022
3. Stephanie.T. Yerkovich, John.W. Upham. Allergens and Respiratory Pollutants, 2011
4. Hans Oettgen, David H Broide. Allergy (Fourth Edition), 2012
5. 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

11. Questions for the final control

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

1. Reasons for increasing the frequency of allergic diseases.
2. Stages of a direct allergic reaction.
3. Types of hypersensitivity reactions.
4. Mechanisms of histamine release.
5. Allergens. Definition. Classification.
6. The concept of cross-allergy.
7. Environmental factors affecting the state of the human immune system.
8. Periods of influence of harmful environmental factors on the state of the immune system.
9. Research methods of ENT organs: overview.
10. Methods of research of ENT organs: instrumental methods.
11. Research methods of ENT organs: laboratory methods.
12. Methods of research of ENT organs: radiation methods.

13. Stages of diagnosis of allergic diseases of the upper respiratory tract and ear. Allergological anamnesis collection.
14. Clinical and laboratory examination for allergic diseases of the upper respiratory tract and ear.
15. Allergological skin tests for allergic diseases of the upper respiratory tract and ear.
16. Provocative tests for allergic diseases of the upper respiratory tract and ear.
17. Immuno-laboratory research in allergic diseases of the upper respiratory tract and ear.

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

18. Ways to eliminate allergens.
19. Local antihistamine therapy for allergic diseases of the upper respiratory tract and ear.
20. Системна антигістамінна терапія алергічних захворювань верхніх дихальних шляхів та вуха.
21. Topical therapy with glucocorticosteroid drugs for allergic diseases of the upper respiratory tract and ear.
22. Systemic therapy with glucocorticosteroid drugs for allergic diseases of the upper respiratory tract and ear.
23. Antileukotriene drugs in the treatment of allergic diseases of the upper respiratory tract and ear.
24. Mast cell membrane stabilizers in the treatment of allergic diseases of the upper respiratory tract and ear.
25. Elimination therapy in the treatment of allergic diseases of the upper respiratory tract and ear.
26. Mechanisms, purpose and benefits of specific immunotherapy in the treatment of allergic diseases of the upper respiratory tract and ear.
27. Methods of introducing allergens for specific immunotherapy of allergic diseases of the upper respiratory tract and ear. Indications and contraindications.

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

28. Diagnosis of atopic dermatitis of the skin of the external auditory canal.
29. Treatment of atopic dermatitis of the skin of the external auditory canal.
30. Mechanisms of development and diagnosis of allergic nasopharyngitis.
31. Methods of treatment of allergic rhinopharyngitis.
32. Pathophysiology and clinical course of secretory otitis against the background of allergic inflammation.
33. Methods of treatment of secretory otitis with an allergic component.
34. Classification of allergic rhinitis. Causative allergens.
35. Clinical manifestations and diagnosis of allergic rhinitis.
36. Differential diagnosis of year-round allergic and vasomotor rhinitis.
37. Degrees of severity of allergic rhinitis and complications.
38. Treatment of allergic rhinitis.
39. Classification of rhinosinusitis. Types of intranasal polyps.
40. Diagnosis and stages of spread.
41. Methods of treatment of rhinosinusitis with eosinophilic polyps.
42. The theory of the pathogenesis of the aspirin triad.
43. Features of the clinical course of the aspirin triad.
44. Treatment of aspirin triad.
45. Immune response in helminthiasis.
46. Manifestations from the side of the upper respiratory tract in case of parasitic sensitization
47. Syndrome of low tolerance to histamine. Methods of correction.

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

48. Types of angioedema. Characteristics of angioedema of the larynx induced by mast cell mediators.
49. Characteristics of angioneuroticbradykinin-induced laryngeal edema. Long-term and short-term prevention.
50. Stages of laryngeal stenosis, principles of treatment (medication, prolonged intubation, tracheotomy).
51. Tracheostomy: indications, its options, performance technique.
52. Classification of allergic reactions to medicinal products. Factors contributing to the development of direct allergic reactions to medicinal products
53. General principles of drug allergy treatment.
54. Pathophysiological mechanisms of anaphylactic shock. The most frequent allergenic factors of development.
55. Clinical picture of anaphylactic shock.
56. Treatment of anaphylactic shock.
57. Lyell's syndrome. Reasons. Differential diagnosis. Treatment.

12. 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
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13. Electronic information resources

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