

MINISTRY OF HEALTH OF UKRAINE  
ODESA NATIONAL MEDICAL UNIVERSITY

Department of OTORHINOLARYNGOLOGY

CONFIRMED by

Acting vice-rector for scientific and pedagogical work

Edvard BURIACHKIVSKYI

September 1<sup>st</sup>, 2023

WORKING PROGRAM IN THE ELECTIVE DISCIPLINE  
«CURRENT ISSUES OF EAR SURGERY»

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

**Field of knowledge:** 22 «Health care»

**Specialty:** 222 «Medicine»

**Educational and professional program:** Medicine

The working 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 222 "Medicine" of the field of knowledge 22 "Health care", approved by the Academic Council of ONMedU (minutes No. 8 dated 29/06/2023).

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The working program is approved at the meeting of the Department of Otorhinolaryngology  
Minutes No. 1 dated 30/08/2023.

Head of the department \_\_\_\_\_ Sergiy Pukhlik

Approved by the guarantor of  
the educational and professional program \_\_\_\_\_

Valeriia MARICHEREDA

Approved by the subject-cycle methodological commission for surgery of ONMedU  
Minutes No. 1 dated 30/08/2023.

Head of the subject-cycle methodological commission for surgery of ONMedU

\_\_\_\_\_ Vasil Mishchenko

Revised and approved at the meeting of the Department of Otorhinolaryngology  
Minutes No. 1 dated 28/08/2024

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Revised and approved at the meeting of the Department of Otorhinolaryngology  
Minutes No. \_\_\_ dated \_\_\_/\_\_\_/20\_\_.

Head of the department \_\_\_\_\_

Sergiy Pukhlik

## 1. Description of the discipline:

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the discipline
Total number:	Field of knowledge 22 «Health care»	<i>Full-time (day) education</i> <i>Elective discipline</i>
Credits of ECTS: 3	Specialty 222 «Medicine»	<i>Course: 6</i>
Hours: 90		<i>Semester: XI - XII</i> <i>Lectures (0 hours)</i>
Content modules: 1	Level of higher education second (master's degree)	<i>Seminars(0 hours)</i>
		<i>Practical classes(30 hours)</i>
		<i>Laboratories(0 hours)</i>
		<i>Independent work (60 hours)</i>
		<i>including individual tasks (0hours)</i>
		<i>Form of final control – Credit</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 surgical treatment of chronic purulent otitis media; tactics of conservative and surgical treatment of exudative otitis; tactics of conservative and surgical treatment of adhesive otitis; tactics of surgical treatment of otosclerosis; patient examination methodology, features of examination of a patient with deafness.

**Purpose:** mastering the methods of diagnosis of patients with chronic purulent otitis media; mastering methods of diagnosing patients with exudative otitis mastering methods of diagnosis of patients with adhesive disease of the middle ear; mastering diagnostic methods for patients with otosclerosis; preparation of patients for surgical intervention due to CSOM; selection of surgical intervention methods in patients with various forms of CSOM; the technique of carrying out remedial operations at CSOM; the technique of performing functional and reconstructive operations in the case of CSOM; peculiarities of the postoperative course in patients after remedial and functional-reconstructive operations.

### Task:

1. assimilation of diagnostic methods for patients with chronic purulent otitis media, exudative otitis, adhesive middle ear disease, otosclerosis;
2. mastering the basic principles of operative interventions on the middle ear;
3. assimilation of indications and contraindications for operative interventions on the middle ear;
4. assimilation of the technique of carrying out remedial operations at the CSOM;
5. assimilation of the technique of performance of functional and reconstructive operations in case of CSOM;
6. mastering the technique of performing operations in adhesive otitis;
7. mastering the technique of performing operations in otosclerosis;
8. mastering the peculiarities of the postoperative course in patients after surgical interventions on the middle 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 problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.

**General competences** according to the requirements of the NRK

GC1. Ability to abstract thinking, analysis and synthesis

GC3. Ability to apply knowledge in practical situations

GC4. Knowledge and understanding of the subject area and understanding of professional activity

GC5. Ability to adapt and act in a new situation

GC6. Ability to make informed decisions

GC7. Ability to work in a team

GC10. Ability to use information and communication technologies

**Special (professional, subject) competences**

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

SC2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results

SC3. Ability to establish a preliminary and clinical diagnosis of the disease

SC4. The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases

SC5. The ability to determine the nature of nutrition in the treatment and prevention of diseases

SC6. Ability to determine the principles and nature of treatment and prevention of diseases

SC7. Ability to diagnose emergency conditions

SC8. Ability to determine tactics and provide emergency medical care

help

SC9. Ability to carry out medical evacuation measures

SC11. Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility, including early intervention systems

SC17. The ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population

SC25. Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results

SC26. The ability to determine the management tactics of persons subject to dispensary supervision

SC27. The ability to diagnose and determine the management tactics of patients with extrapulmonary and widespread forms of tuberculosis, including co-infection of TB/HIV with a chemoresistant course

**Program learning outcomes (PLO):**

PLO1. Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.

PLO2. Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.

PLO3. Specialized conceptual knowledge that includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems, including the system of early intervention.

PLO4. Identify and identify leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).

PLO5. Collect complaints, anamnesis of life and diseases, assess the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information regarding the diagnosis (according to list 4), taking into account the age of the patient.

PLO6. To establish the final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis, observing the relevant ethical and legal norms, under the control of the head physician in the conditions of the health care institution (according to the list 2).

PLO7. Assign and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4), patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).

PLO8. Determine the main clinical syndrome or symptom that determines the severity of the condition of the victim/injured person (according to list 3) by making a reasoned decision about the person's condition under any circumstances (in the conditions of a health care facility, outside its borders), including in

conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.

PLO9. Determine the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the age of the patient, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to substantiate personalized recommendations under the control of the head physician in the conditions of a medical institution.

PLO10. Determine the necessary mode of work, rest and nutrition on the basis of the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.

PLO14. Determine tactics and provide emergency medical care in emergency situations (according to list 3) in limited time conditions according to existing clinical protocols and standards of treatment.

PLO17. Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.

PLO18. To determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents.

PLO21. Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.

PLO32. The ability to diagnose and determine the management tactics of patients with extrapulmonary and common forms of tuberculosis, including co-infection of TB/HIV with a chemoresistant course.

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

**Know:**

Basics of analgesia in otosurgery; tactics of conservative and surgical treatment of chronic purulent otitis media; tactics of conservative and surgical treatment of exudative otitis; tactics of conservative and surgical treatment of adhesive otitis; tactics of surgical treatment of otosclerosis; patient examination methodology, features of examination of a patient with deafness.

**Be able:**

- organize appropriate sanitary and epidemic conditions for various premises of the ENT department;
- conduct anamnesis collection and objective examination of the ENT of a patient with middle ear diseases;
- choose an adequate method of anesthesia for carrying out one or another intervention;
- diagnose various hearing disorders;
- choose the tactics of postoperative management of the patient's ENT, depending on the surgical intervention;
- diagnose various inflammatory and non-inflammatory processes in the middle ear, carry out differential diagnosis between them;
- choose the appropriate surgical tactics for various diseases of the middle ear;
- to draw up a program of postoperative supervision of the patient;

**3. The content of the educational discipline**

**Topic 1.** Clinical anatomy and physiology of the hearing organ. Clinical anatomy of the external ear (auricle, external auditory canal). The structure of the tympanic membrane. System of cavities of the middle ear, walls of the tympanic cavity, its contents. Topography of the facial nerve. Types of mastoid structure. The structure of the cochlear and its receptor apparatus.

**Topic 2.** Hearing research methods. Hearing research in whispered and spoken language. Hearing research using tuning forks. Hearing passport. Tone threshold audiometry. Ways of masking. Types of audiograms for disorders of the sound-conducting and sound-receiving

departments. Methods of determining the degree of hearing loss. The concept of "phenomenon of accelerated increase in volume" .

**Topic 3.** Endoscopic methods of research of ENT organs. Otoscopy: usual, with the help of a Zigle watering can, an otoscope. Microotoscopy, direct endoscopy. Endoscopic examination of the nasopharynx.

**Topic 4.** Etiology and pathogenesis of chronic purulent otitis media. The role of auditory tube function in the development of chronic purulent otitis media. The role of diseases of the upper respiratory tract, the immunological state of the body and the allergic factor in the genesis of chronic purulent otitis media. Forms of chronic purulent otitis media/

**Topic 5.** Chronic tubo-tympanic otitis media. Clinical course. Antromastoidotomy with mastoidoplasty. Tympanoplasty. Audiometric indications and contraindications to hearing restoration operations. Stages and types (according to Wulshtein) of tympanoplasty, principles of surgical technique. The use of various materials for the restoration of defects of the tympanic membrane and auditory ossicles (auto-homo- and allografts).

**Topic 6.** Chronic epitympano-antral otitis media. Cholesteatoma - theories of genesis, forms, classification. Indications for radical ear surgery, its stages. Indications for hearing restoration operations. Tympanoplasty. Oblivities of the postoperative course after remedial and hearing-improving operations on the middle ear, possible complications.

**Topic 7.** Secretory otitis media - causes, significance of allergy and dysfunction of the auditory tube in the genesis of the disease. Otoscopy data, study of auditory function. Data of audiometry and tympanometry in secretory otitis media.

**Topic 8.** Methods of conservative and surgical treatment of secretory otitis media: tympanopuncture, myringotomy, shunting, laser drainage of the tympanic cavity. Analgesia during shunting of the tympanic cavity, types of shunts.

**Topic 9.** Peculiarities of the postoperative course after bypass of the tympanic cavity, possible complications. The tactics of the surgeon in case of complications of myringotomy or shunting of the tympanic cavity.

**Topic 10.** Adhesive disease of the middle ear - causes, significance of allergy and dysfunction of the auditory tube in the genesis of the disease. Otoscopy data, study of auditory function.

**Topic 11.** Methods of conservative and surgical treatment. Tympanoplasty.

**Topic 12.** The use of various materials for the restoration of defects of the tympanic membrane and auditory ossicles (auto-homo- and allografts). Peculiarities of the postoperative course after tympanoplasty, possible complications.

**Topic 13.** Otosclerosis - pathomorphological changes in the temporal bone, clinical symptoms, acumetry and vestibulometry data.

**Topic 14.** Principles of conservative and surgical treatment of otosclerosis. Stapedectomy and stapedoplasty.

**Topic 15.** Peculiarities of the postoperative course after operations for otosclerosis, possible complications.

**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

Theme	Hours					
	Total	including				
		lectures	Seminars	Practical	Laboratory	ISW
Topic 1. Clinical anatomy and physiology of the hearing organ.	6	0	0	2	0	4
Topic 2. Hearing	6	0	0	2	0	4

research methods.						
Topic 3. Endoscopic methods of research of ENT organs.	6	0	0	2	0	4
Topic 4. Etiology and pathogenesis of chronic purulent otitis media.	6	0	0	2	0	4
Topic 5. Chronic tubo-tympanic otitis media.	6	0	0	2	0	4
Topic 6. Chronic epitympano-antral otitis media.	6	0	0	2	0	4
Topic 7. Secretory otitis media.	6	0	0	2	0	4
Topic 8. Methods of conservative and surgical treatment of secretory otitis media.	6	0	0	2	0	4
Topic 9. Peculiarities of the postoperative course after bypass of the tympanic cavity, possible complications.	6	0	0	2	0	4
Topic 10. Adhesive disease of the middle ear	6	0	0	2	0	4
Topic 11. Methods of conservative and surgical treatment. Tympanoplasty.	6	0	0	2	0	4
Topic 12. The use of various materials for the restoration of defects of the tympanic membrane	6	0	0	2	0	4
Topic 13. Otosclerosis - pathomorphological changes in the temporal bone.	6	0	0	2	0	4
Topic 14. Principles of conservative and surgical treatment of otosclerosis	6	0	0	2	0	4
Topic 15. Peculiarities of the postoperative course after operations for otosclerosis, possible complications.	6	0	0	2	0	4
<b>Credit</b>	0	0	0	0	0	0
<b>Individual task</b>	0	0	0	0	0	0
<b>Total</b>	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**

<b>№</b>	<b>THEME</b>	<b>Hours</b>
1.	Clinical anatomy and physiology of the hearing organ.	2
2.	Hearing research methods.	2
3	Endoscopic methods of research of ENT organs.	2
4	Etiology and pathogenesis of chronic purulent otitis media.	2
5	Chronic tubo-tympanic otitis media.	2
6	Chronic epitympano-antral otitis media.	2
7	Secretory otitis media.	2
8	Methods of conservative and surgical treatment of secretory otitis media.	2
9	Peculiarities of the postoperative course after bypass of the tympanic cavity, possible complications.	2
10	Adhesive disease of the middle ear	2
11	Methods of conservative and surgical treatment. Tympanoplasty.	2
12	The use of various materials for the restoration of defects of the tympanic membrane	2
13	Otosclerosis - pathomorphological changes in the temporal bone.	2
14	Principles of conservative and surgical treatment of otosclerosis	2
15	Peculiarities of the postoperative course after operations for otosclerosis, possible complications.	2
	<b>Total hours</b>	<b>30</b>

**5.4. Themes of laboratories** Laboratories are not provided.

**6. Independent work of the student**

<b>No.</b>	<b>Theme</b>	<b>Hours</b>
1.	Topic 1-15. Preparation for practical classes	4
	<b>Total</b>	<b>60</b>

**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 most common hearing defects.

**Independent work:** independent work with recommended basic and additional literature, with electronic information resources, independent mastering of communication algorithms with ENT patients.

**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 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.

### 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:***

Brad A. Stach. Clinical Audiology: An Introduction: Plural Publishing, 3rd Edition. 2021. Pp. 1-645.

**11. Questions for the final control**

1. Clinical anatomy of the external ear (auricle, external auditory canal). The structure of the tympanic membrane. System of cavities of the middle ear, walls of the tympanic cavity, its contents.
- 2 Topography of the facial nerve. Types of mastoid structure. The transmission, transformation, adaptation and protective role of the middle ear in the mechanism of sound conduction. The structure of the curl and its receptor apparatus.
3. Bone conduction, its types. Theories of sound conduction and sound perception. Study of auditory function: determination of hearing acuity by language, tuning forks. Principles of threshold audiometry. Suprathreshold, language audiometry, principles of game audiometry.
4. Impedance audiometry: main types of tympanograms, study of the acoustic reflex. Registration of auditory evoked potentials. Otoacoustic emission.
5. Interpretation of the main types of threshold audiograms, differential diagnosis of sound conduction damage and sound perception. Topical diagnosis of hearing disorders. Adequate stimuli of the ampullary and otolith apparatus. Types of vestibular reactions. Nystagmus, its characteristics. Modern methods of vestibulometry: coordination, caloric, rotational, pressor test, electronystagmography, stabilography.
6. Etiology and pathogenesis of chronic purulent otitis media. The role of auditory tube function in the development of chronic purulent otitis media. The role of diseases of the upper respiratory tract, the immunological state of the body and the allergic factor in the genesis of chronic purulent otitis media
7. Forms of chronic purulent otitis media. Chronic tubo-tympanic otitis media. Clinical course. Antromastoidotomy with mastoidoplasty, posterior tympanotomy, atticotomy, indications for these types of operations, technique of execution, possible complications. Audiometric indications and contraindications to hearing restoration operations. Stages and types (according to Wulshtein) of tympanoplasty, principles of surgical technique. The use of various materials for the restoration of defects of the tympanic membrane and auditory ossicles (auto-homo- and allografts).
8. Chronic epitympano-antral otitis media. Cholesteatoma - theories of genesis, forms, classification. Indications for radical ear surgery, its stages. Indications for hearing restoration operations.
9. Tympanoplasty. Oblivities of the postoperative course after remedial and hearing-improving operations on the middle ear, possible complications.
10. Exudative otitis media - causes, significance of allergy and auditory tube dysfunction in the genesis of the disease.
11. Data of otoscopy, study of auditory function. Methods of conservative and surgical treatment: tympanopuncture, myringotomy, shunting, laser drainage of the tympanic cavity.
12. Peculiarities of the postoperative course after bypassing the tympanic cavity, possible complications.
13. Adhesive disease of the middle ear - causes, significance of allergy and dysfunction of the auditory tube in the genesis of the disease.
14. Data of otoscopy, study of auditory function. Methods of conservative and surgical treatment.

15. Tympanoplasty. The use of various materials for the restoration of defects of the tympanic membrane and auditory ossicles (auto-homo- and allografts).
16. Peculiarities of the postoperative course after tympanoplasty, possible complications.
17. Otosclerosis – pathomorphological changes in the temporal bone, clinical symptoms, acumeny and vestibulometry data.
18. Principles of conservative and surgical treatment of otosclerosis. Stapedectomy and stapedoplasty.
19. Peculiarities of the postoperative course after operations for otosclerosis, possible complications.
20. Registration of auditory evoked potentials. Otoacoustic emission. Principles of cochlear implantation.

### **12. Recommended literature *Basic:***

1. V.I. Popovych Modern standards of treatment of acute inflammatory diseases of the ENT organs (Recommendations). - Kyiv, 2019. - 80 p.
2. Babinets L.S., Bezditko P.A., Pukhlik S.M. etc. Family medicine: in 3 books: textbook. Book 3. Special part. Multi-specialty of general medical practice. - k., 2017. 680 p.
3. Zabolotnyi D.I., Mitin Y.V., Bezshapochnyi S.B., Dieva Yu.V. Otorhinolaryngology. - K.: VSV "Medicine", 2017. - 460 p.
4. Mitin Yu.V., Naumenko O.M., Deeva Yu.V., Shevchuk Yu.V., Ostrovska O.O. Guide to practical classes in otorhinolaryngology for teaching according to the credit-module system: Study guide. - K.: VSV "Medicine", 2015. - 136 p.

#### ***Additional:***

1. Laiko A.A., Kosakovskiy A.L., Zabolotna D.D., Borysenko O.M., Sinyachenko V.V., Tymchuk S.M., Kosakuvska I.A., Shuh L.A., Segal V.V., Havrylenko Yu.V. Children's otorhinolaryngology: National textbook. - K.: Logos, 2015. - 576 p.
2. Instructions for military field surgery / edited by Y.L.Zarutskiy, A.A.Shudraka.-K.: SPD Chalchynska N.V., 2014.-396 p.
- 3.R.Corbridge, N.Steventon. Oxford Handbook of ENT and Head and Neck Surgery //Paperback, 2020. - 496 p.
- 4.Y.Mitin, Y.Deyeva, Y.Gomza, V. Didkovskiy etc. Otorhinolaryngology// Medicine, 2018. – 264p.
- 5.R.Probst, G.Grevers, H.Iro. Basic Otorhinolaryngology. A Step-by-Step Learning Guide//Thieme, 2017. – 430p.
- 6.M. M Paparella. Paparella'S Otolaryngology Head & Neck Surgery (2 Volumes)// Hardcover, 2020. – 460p.
- 7.Pukhlik S.M., Titarenko O.V. Otorhinolaryngology// Odessa, 2011. – 172 p.
- 8.S.N.Kumar. Clinical Cases In Otolaryngology// Paperback, 2016. – 260p.
- 9.R.Pasha, J.S.Golub. Otolaryngology-Head and Neck Surgery : Clinical Reference Guid// Paperback, 2017. - 800 p.
- 10.J. A.Seikel, D.G.Drumright, D.J.Hudock. Anatomy and Physiology for Speech, Language, and Hearing //Format Hardback, 2019. - 700 p.
- 11.K.S.Helfer, E.L.Bartlett, A.N.Popper, R.R.Fay. Aging and Hearing: Causes and Consequences// Hardback< 2020. – 326p.
- 12.A.Al-Qahtani, H.Haidar, A.Larem. Textbook of Clinical Otolaryngology// Hardback, 2020. - 1155 p.
- 13.Z.Mu, J.Fang. Practical Otorhinolaryngology, Head and Neck Surgery: Diagnosis and Treatment// Hardback, 2020. - 314 p.
- 14.H.H.Ramadan, F.M.Baroodi. Pediatric Rhinosinusitis// Paperback, 2020. - 300 p.
- 15.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, 3-Volume Set// Format Hardback, 2020. - 3568 p.

#### 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
4. [www.dec.gov.ua/mtd/home/](http://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](http://www.gmc-uk.org)- *General Medical Council (GMC)*
7. [www.bundesaerztekammer.de](http://www.bundesaerztekammer.de) – German Medical Association