



**Syllabus on the discipline «Otorhinolaryngology»**

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| <b>1. General information</b>  |   |
| <b>Faculty</b>   | Medical faculty   |
| <b>Educational program (field, specialty, level of higher education, form of education)</b>                              | 22 Healthcare, 222 Medicine, second (Master's) level of higher education, full-time   |
| <b>Academic year</b>   | 2023-2024   |
| <b>Discipline name, code (electronic identification at the Danylo Halytsky Lviv National Medical University website)</b> | Otorhinolaryngology, OK 35.<br><a href="https://new.meduniv.lviv.ua/kafedry/kafedra-otorynolaryngologiyi">https://new.meduniv.lviv.ua/kafedry/kafedra-otorynolaryngologiyi</a>  |
| <b>Department (name, address, phone, email)</b>  | Department of Otorhinolaryngology<br>79010, Lviv, Chernihivska str., 3<br>tel. +380 (32) 2756334, 2768987<br><a href="mailto:kaf_otorhinolaryngology@meduniv.ua">kaf_otorhinolaryngology@meduniv.ua</a><br>St. Paraskeva Medical Center, Lviv, Zavodska str., 7<br>tel. (095) 295-4-000, (067) 295-4-000<br><a href="mailto:Office@medcenter.lviv.ua">Office@medcenter.lviv.ua</a>  |
| <b>Chair of the Department (e-mail)</b>  | Moskalyk Oksana Yevgenivna, PhD, MD, Associate Professor<br><a href="mailto:okmoskalyk@gmail.com">okmoskalyk@gmail.com</a>  |
| <b>Educational year (year of the discipline study)</b>   | 4   |
| <b>Semester (semester of the discipline study)</b>   | 7,8   |
| <b>Type of the discipline/module (mandatory / optional)</b>  | Differential credit<br>Mandatory  |
| <b>Teaching staff (names, surnames, scientific degrees and titles, of the teaching staff, e-mails)</b>                   | 1. Moskalyk Oksana Yevgenivna, Associate Professor<br><a href="mailto:okmoskalyk@gmail.com">okmoskalyk@gmail.com</a><br>2. Tsymar Andriy Vasyliiovych, Associate Professor<br><a href="mailto:tsimdoc@gmail.com">tsimdoc@gmail.com</a><br>3. Barylyak Andriy Yuriiiovych, Associate Professor<br><a href="mailto:barylyak.andriy@gmail.com">barylyak.andriy@gmail.com</a><br>4. Chormiy Oleksandra Volodymyrivna, Assistant Professor, <a href="mailto:chorniy770@gmail.com">chorniy770@gmail.com</a><br>5. Haevskyy Volodymyr Yuriiiovych, Assistant Professor, <a href="mailto:hayevskyy85@gmail.com">hayevskyy85@gmail.com</a><br>6. Semenyuk Oleksandr Oleksandrovych, Assistant Professor, <a href="mailto:oles.semenyuk@gmail.com">oles.semenyuk@gmail.com</a><br>7. Tynitovska Oksana Ivanivna, Assistant Professor, <a href="mailto:o.i.tynitovska@gmail.com">o.i.tynitovska@gmail.com</a><br>8. Kruk Myroslav Myroslavovych, Assistant Professor, <a href="mailto:mkruck@ukr.net">mkruck@ukr.net</a> |
| <b>Erasmus yes/no (availability of discipline for students within the program Erasmus+)</b>                              | No  |

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| <b>Person, responsible for syllabus (the person to whom comments on the syllabus should be given, e-mail)</b>   | Tsymar Andriy Vasyliiovych, Associate Professor<br><a href="mailto:tsimdoc@gmail.com">tsimdoc@gmail.com</a>  |
| <b>Number of ECTS credits</b>   | 3  |
| <b>Number of hours (lectures / practical classes / self-reliance work)</b>  | Lectures - 6 hours<br>Practical classes - 34 hours<br>Self works - 50 hours<br>Total: 90 hours.  |
| <b>Language</b>   | Ukrainian, English   |
| <b>Information on the consultations</b>   | Consultations are held in accordance with the approved schedule.<br>On the website Danylo Halytsky LNMU, ENT Department web pages and information stands.  |
| <b>Address, telephone and rules of operation of the clinical base, office... (if necessary)</b>   | Department of Otorhinolaryngology<br>Danylo Halytsky LNMU<br>1. 79010, Lviv, Chernihivska str., 3<br>tel. +380 (32) 2756334, 2768987<br>2. St. Paraskeva Medical Center, Lviv, Zavodska str., 7<br>tel. (095) 295-4-000, (067) 295-4-000 |
| <b>2. Short resume of the discipline:</b>   |  |
| <p>The study of the discipline is carried out in the 4th year of study.</p> <p>Otorhinolaryngology is a clinical discipline that studies the anatomy, physiology and pathology of the ear, upper respiratory tract and adjacent areas. The importance and necessity of its teaching at the final stage of doctor's training is due to the fact that diseases of the upper respiratory tract are among the first among human diseases and account for about 15% of all appeals to medical institutions. In addition, timely treatment of ENT diseases is the prevention of various pathologies of internal organs, helps prevent such severe chronic diseases as rheumatism, polyarthritus, pyelonephritis, cholecystitis, vascular pathology, nervous system, visual organ and thus determines the preservation of efficiency and longevity.</p> <p><b>Types of educational activities of students according to the curriculum are:</b></p> <ul style="list-style-type: none"> <li>-lecture material;</li> <li>-practical training;</li> <li>-self-work of the students</li> <li>-consultations.</li> </ul> <p><b>Practical classes include:</b></p> <ul style="list-style-type: none"> <li>-study of the discipline of otorhinolaryngology;</li> <li>-mastery of practical skills.</li> </ul> <p>In practical classes in the discipline of "Otorhinolaryngology" students are recommended:</p> <ul style="list-style-type: none"> <li>-perform written tasks (test control to determine the initial level of knowledge, test tasks and situational tasks for the final control of the level of knowledge of students, watching educational thematic videos);</li> <li>use of diagrams, tables, slides, models, computer presentations;</li> <li>-practical skills (tools for endoscopic examination of ENT organs: frontal reflector and frontal illuminator, nasal mirrors, spatulas, mirrors for posterior rhinoscopy, laryngeal mirrors, ear mirrors).</li> </ul> |  |
| <b>3. Objective and tasks of the discipline:</b>  |  |
| <p><b>1. The purpose of teaching the discipline "Otorhinolaryngology"</b> is to master the methods of diagnosis, treatment and prevention of ENT diseases, especially the most common. To achieve this educational goal the student must know: clinical anatomy and physiology of ENT organs and modern methods of their study: etiology, pathogenesis, clinic, methods of treatment and prevention of diseases of</p>  |  |

the nose, sinuses, pharynx, larynx, outer, middle and inner ear, and also the complications caused by them.

**2. The main tasks of studying the discipline "Otorhinolaryngology"** are the study of anatomy, physiology and pathology of the ear, upper respiratory tract and adjacent areas.

**The student must be able to:**

**1. Evaluate the results of ENT examination:**

Use a head reflector and headlight. Perform an anterior rhinoscopy, assess the condition of the nasal cavity in the norm and in case of abnormalities. Perform posterior rhinoscopy, assess the condition of the posterior parts of the nose and nasal pharynx in the norm and in case of abnormalities. Perform oropharyngoscopy, assess the condition of the oral cavity and oral pharynx in the norm and in case of abnormalities. Perform indirect laryngoscopy, assess the condition of the laryngeal pharynx and larynx in normal and in case of abnormalities. Perform otoscopy, assess the condition of the external auditory canal and eardrum in the norm and in case of abnormalities.

**2. Recognize the most common ENT diseases and their complications:**

Among the complaints and anamnesis of the patient to choose the symptoms that give reason to suspect the presence of ENT diseases, to find out the causes of the disease. Assess and compare the most informative and objective signs of this disease. Compare subjective and objective data confirming the diagnosis of the patient. Explore hearing with "live" speech and tuning forks. Evaluate the typical types of audiogram in the norm, in case of violation of the sound conduction, sound perception apparatus and their combined damage. Evaluate the data of X-ray examination of radiographs of the nose and paranasal sinuses, temporal bone, pharynx, larynx computed tomography or magnetic resonance imaging. Evaluate the data of laboratory research methods (general blood test, coagulogram, cerebrospinal fluid, contents of the paranasal sinuses). Establish a preliminary diagnosis and be able to make a differential diagnosis of ENT diseases.

**3. Prescribe treatment for these diseases.**

Make a plan for examination of the ENT organs. Make a treatment plan for a patient with this pathology. If necessary, perform manipulations: lubricate the mucous membrane of the nasal and pharyngeal cavities; to carry out superficial anesthesia of the mucous membrane of the nasal and pharyngeal cavities; To appoint the corresponding treatment of ENT diseases, to make the scheme of treatment of patients.

**The student must master:**

**1. Typical endoscopic methods of ENT examination:**

- to carry out inspection of the otorhinolaryngological patient.
- perform endoscopy of ENT organs, use a frontal reflector or frontal illuminator, master the technique and practice the technique of endoscopic examination of an otorhinolaryngological patient (anterior and posterior rhinoscopy, oropharyngoscopy, indirect laryngoscopy, otoscopy).

**2. Practical skills:**

- be able to perform typical manipulations: rinsing and toilet of the ear, removal of sulfur plugs and foreign bodies, introduction of ear drops into the eardrum and ear canal by compression, insertion into the ear turundy, pneumo-massage of the eardrum, blowing ear canals by the Politzer's method, the method of catheterization of the ear tube.
- perform the following manipulations: taking swabs from the nose and throat, lubrication, irrigation and insufflation of the pharynx with drugs, lavage, to examine nasal breathing in children with hypertrophy of the pharyngeal tonsil.
- be able to perform the infusion of drugs into the larynx, apply a compress to the neck.
- master the skills of using a tracheostomy cannula and tracheostomy care.

**3. Methods of providing emergency care to patients with injuries, foreign bodies, bleeding from the ENT organs and stenosis of the upper respiratory tract:**

- perform the toilet of the nasal cavity, the insertion of the turund in the general nasal passage, to anemize the mucous membrane of the nasal cavity (application, infiltration).

-perform examination (external examination, palpation of the lymph nodes), assess the condition of the mucous membrane (presence or absence of redness, infiltration, edema, sufficiency of the glottis for breathing, mobility of the larynx).

-among complaints and medical history of the patient to choose the symptoms that give reason to suspect the presence of a foreign body, a combined injury. Examine the nose, pharynx and larynx. Highlight the most informative and objective signs that confirm the presence of foreign bodies, injuries, bleeding. Evaluate the data of radiographs, computed tomography and magnetic resonance imaging. Make a treatment plan for a patient with this pathology. Remove foreign bodies from the ear, nose and pharynx. Make anterior and posterior nasal tamponade.

Provide first aid for eardrum injury, contusion of the middle and inner ear, hematoma. Make a reposition of the bone fragments of the nose. Apply a sling to the nose.

**The study of the discipline** involves the supervision of patients with writing a medical history, solving situational problems, testing, computer control in assessing the initial, current and final level of knowledge.

Competences and learning outcomes, the formation of which is facilitated by the discipline (relationship with the normative content of training of higher education seekers, formulated in terms of learning outcomes in the Standard of Higher Education).

In accordance with the requirements of the Standard of Higher Education, the discipline provides students with the acquisition of competencies:

**A) general:**

- ability to abstract thinking, analysis and synthesis;
- ability to learn and possess modern knowledge;
- ability to examine the patient;
- ability to apply knowledge in practical situations;
- ability to differentiate and analyze terms;
- ability to diagnose, apply methods of diagnosis and treatment.

**B) special (professional, subject):**

- ability to perform a subtest of test tasks of the professional direction of the licensing exam KROK-2 and passing the exam in the discipline "Otorhinolaryngology" direction as part of the state qualifying exam;
- ability to master the technique of using the frontal reflector;
- ability to conduct medical consultation;
- the ability to draw up a patient's medical history, diagnosis, treatment;
- ability to conduct research;
- ability to use modern information technologies.

Detailing of competencies according to NQF descriptors in the form of "Competence Matrix".

#### 4. Prerequisites of the discipline

**Program competencies (K):**

1. Ability to abstract thinking, analysis and synthesis.
2. Knowledge and understanding of the subject area and understanding of professional activity.
3. Ability to apply knowledge in practice.
4. Ability to communicate in the state language both orally and in writing.
5. Ability to communicate in English.
6. Skills in the use of information and communication technologies.
7. Ability to search, process and analyze information from various sources.
8. Ability to adapt and act in a new situation.
9. Ability to identify, pose and solve problems.

10. Ability to be critical and self-critical.
11. Ability to work in a team.
12. The desire to preserve the environment.
13. Ability to act socially responsibly and consciously.
14. Ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.
15. Ability to preserve and increase moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies, use different types and forms of motor activities for active recreation and a healthy lifestyle.

### **Professional competencies of the specialty (PC)**

- PC 1. Ability to collect medical information about the patient and analyze clinical data.
- PC 2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.
- PC 3. The ability to establish a preliminary and clinical diagnosis of the disease.
- PC 4. The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases.
- PC 5. Ability to determine the nature of nutrition in the treatment and prevention of diseases of patients.
- PC 6. Ability to determine the principles and nature of treatment and prevention of diseases.
- PC 7. Ability to diagnose emergency conditions.
- PC 8. Ability to determine tactics and provide emergency medical care.
- PC 9. Ability to carry out medical evacuation measures.
- PC 10. Ability to perform medical manipulations.
- PC 11. 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.
- PC 12. The ability to determine the tactics of physiological pregnancy, physiological childbirth and the postpartum period. Family planning and contraceptive method counseling skills.
- PC 13. Ability to carry out sanitary and hygienic and preventive measures
- PC 14. Ability to plan and carry out preventive and anti-epidemic measures regarding infectious diseases.
- PC 15. The ability to conduct an examination of work capacity.
- PC 16. Ability to maintain medical documentation, including 13 electronic forms.
- PC 17. Ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population.
- PC 18. Ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources
- PC 19. Ability to organize and integrate the provision of medical assistance to the population and marketing of medical services.
- PC 20. Ability to conduct epidemiological and medical-statistical studies of the health of the population; processing of social, economic and medical information.
- PC 21. It is clear and unambiguous to convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying.
- PC 22. Ability to manage work processes in the field of health care, which are complex, unpredictable and require new strategic approaches.
- PC 23. Ability to develop and implement scientific and applied projects in the field of health care.
- PC 24. Compliance with ethical principles when working with patients and laboratory animals.
- PC 25. Observance of professional and academic integrity, bear responsibility for the reliability of the obtained scientific results.

### **Learning outcomes:**

Integrative final program learning outcomes, the formation of which is facilitated by the discipline "Otorhinolaryngology":  
 -evaluate the patient's complaints, medical history, patient's life history,

-examine the ENT organs: anterior and posterior rhinoscopy, oropharyngoscopy, otoscopy, indirect laryngoscopy.  
 - on the basis of the received data to define the preliminary diagnosis, to make the plan of additional inspections, to choose medical tactics.

### 5. Program results of study

#### List of the results of study

| <i>Code of the result of study</i>  | <i>Content of the result of study</i>  | <i>Link to the code in the matrix of competencies</i>                       |
|---|--|---|
| Code is created while filling out the syllabus (categories: Kn – knowledge, Ab – ability, C – competence, AR – autonomy and responsibility) | Results of study determine that the student must know, understand and be able to perform, after completing the discipline. Results of study follow from the set learning goals.<br>To enroll in the discipline, it is necessary to confirm the achievement of each result of study.  | Symbol of the Program Result of study Code in the Higher Education Standard |
| <b>Kn-1:</b>  | Clinical anatomy and physiology of ENT organs and modern methods of their research, etiology, pathogenesis, clinic, methods of treatment and prevention of diseases of the nose, paranasal sinuses, pharynx, larynx, outer, middle and inner ear, as well as complications caused by them.   | <i>PR-1</i>   |
| <b>Ab-1:</b>  | Evaluate the results of ENT examination, identify the most common ENT diseases and their complications, prescribe treatment for these diseases.  |   |
| <b>C-1:</b>   | Ability to collect medical information about the patient and analyze clinical data. Ability to perform a subtest of test tasks of the professional direction of the license exam KROK-2 and compile a differential test in the discipline of otorhinolaryngology direction as part of the state qualifying examination.  |   |
| <b>AR-1:</b>  | Independence, responsibility.  |   |
| <b>Kn-1:</b>  | Ability to master the technique of using the frontal reflector or headlight illuminator, learn the technique and practice the technique of endoscopic examination otolaryngological patient.   | <i>PR-2</i>   |
| <b>Ab-1:</b>  | To perform anterior and posterior rhinoscopy, oropharyngoscopy indirect laryngoscopy, otoscopy.  |   |
| <b>C-1 :</b>  | Ability to interpret the results of laboratory and instrumental examination. The procedure, methods and techniques of examination of otorhinolaryngological patient, normal endoscopic picture of the nose, pharynx, larynx and ears, as well as possible pathological abnormalities in their endoscopic picture, clinical anatomy, physiology of the ENT organs, investigation methods. |   |
| <b>AR- 1:</b>   | Independence, responsibility.  |   |
| <b>Kn-1:</b>  | Collect data on patient complaints, medical history, life history, perform examinations: oropharyngoscopy, rhinoscopy, otoscopy, indirect laryngoscopy.  | <i>PR -3</i>  |

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| <b>Ab-1:</b>  | Evaluate the results of examination of ENT organs, identify the most common ENT diseases and their complications, prescribe treatment for these diseases.   |             |
| <b>C-1 :</b>  | Ability to diagnose: determine the preliminary, clinical, final, concomitant diagnosis, emergencies. Ability to conduct a medical consultation.   |             |
| <b>AR-1:</b>  | Independence, responsibility.   |             |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan.  | <i>PR-4</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |             |
| <b>C-1 :</b>  | Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.<br>Ability to apply knowledge in practice. Ability to communicate in the state language both orally and in writing. Ability to communicate in English (if necessary).<br>Registration of the patient's medical history, diagnosis, treatment. |             |
| <b>AR- 1:</b> | Independence, responsibility.   |             |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan..   | <i>PR-5</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |             |
| <b>C-1 :</b>  | Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.<br>Ability to apply knowledge in practice. Ability to communicate in the state language both orally and in writing. Ability to communicate in English (if necessary).<br>Registration of the patient's medical history, diagnosis, treatment. |             |
| <b>AR-1:</b>  | Independence, responsibility.   |             |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan.  | <i>PR-6</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |             |
| <b>C-1 :</b>  | Ability to abstract thinking, analysis and synthesis.<br>Knowledge and understanding of the subject area and understanding of professional activity.<br>Ability to apply knowledge in practice. Ability to communicate in English. Registration of the patient's medical history, diagnosis, treatment.   |             |
| <b>AR- 1:</b> | Independence, responsibility.   |             |
| <b>Kn-1:</b>  | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan. (means of prevention).   | <i>PR-7</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |             |
| <b>C-1 :</b>  | Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity. Ability to apply knowledge in practice. Ability to communicate in English. Skills in the use of information and communication technologies. Ability to search, process and  |             |

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|               | <p>analyze information from various sources. Ability to adapt and act in a new situation.</p> <p>Ability to identify, pose and solve problems. The ability to be critical and self-critical.</p> <p>Ability to work in a team.</p> <p>Ability to preserve and increase moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies. active recreation and leading a healthy lifestyle. Registration of the patient's medical history, diagnosis, treatment;</p> |              |
| <b>AR- 1:</b> | Independence, responsibility.   |              |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan.  | <i>PR-8</i>  |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |              |
| <b>C-1 :</b>  | <p>Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.</p> <p>Ability to apply knowledge in practice. Ability to communicate in English. Registration of the patient's medical history, diagnosis, treatment.</p>   |              |
| <b>AR-1:</b>  | Independence, responsibility.   |              |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan.  | <i>PR-9</i>  |
| <b>Ab-1:</b>  | Evaluate the results of examination of ENT organs.  |              |
| <b>C-1 :</b>  | <p>Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.</p> <p>Ability to apply knowledge in practice. Ability to communicate in English. Registration of the patient's medical history, diagnosis, treatment.</p>   |              |
| <b>AR- 1:</b> | Independence, responsibility.   |              |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan.  | <i>PR-10</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |              |
| <b>C-1 :</b>  | <p>Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.</p> <p>Ability to apply knowledge in practice. Ability to communicate in English. Registration of the patient's medical history, diagnosis, treatment.</p>   |              |
| <b>AR- 1:</b> | Independence, responsibility.   |              |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan.  | <i>PR-11</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |              |



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| <b>C-1 :</b>  | Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.<br>Ability to apply knowledge in practice. Ability to communicate in English. Registration of the patient's medical history, diagnosis, treatment.   |              |
| <b>AR- 1:</b> | Independence, responsibility.  |              |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan.   | <i>PR-12</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.  |              |
| <b>C-1 :</b>  | Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.<br>Ability to apply knowledge in practice. Ability to work in a team.<br>The desire to preserve the environment. The ability to act socially responsibly and consciously. The ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms.<br>Ability to organize and conduct medical evacuation activities.<br>Ability to determine tactics, methods and provide emergency medical care. Registration of the patient's medical history, diagnosis, treatment. |              |
| <b>AR- 1:</b> | Independence, responsibility.  |              |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan.   | <i>PR-13</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.  |              |
| <b>C-1 :</b>  | Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.<br>Ability to apply knowledge in practice. Ability to work in a team.<br>The ability to act socially responsibly and consciously. Ability to provide first aid according to the protocols of tactical medicine.<br>Registration of the patient's medical history, diagnosis, treatment.  |              |
| <b>AR- 1:</b> | Independence, responsibility.  |              |
| <b>Kn -1:</b> | Writing reports, making a presentation, using literature.  | <i>PR-14</i> |
| <b>Ab-1:</b>  | Submit a report, to speak to an audience, answer the questions.  |              |
| <b>C-1 :</b>  | Ability to conduct research.   |              |
| <b>AR- 1:</b> | Independence, responsibility.  |              |
| <b>Kn -1:</b> | Writing reports, making a presentation, using literature, using internet.  | <i>PR-15</i> |
| <b>Ab-1:</b>  | Submit a report, to speak to an audience, answer the questions.  |              |
| <b>C-1 :</b>  | Ability to use modern information technology. Ability to preserve and increase moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of  |              |

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|               | society, techniques and technologies. active recreation and leading a healthy lifestyle.   |              |
| <b>AR- 1:</b> | Independence, responsibility.  |              |
| <b>Kn -1:</b> | Writing reports, making a presentation, using literature, using internet.  | <i>PR-16</i> |
| <b>Ab-1:</b>  | Submit a report, to speak to an audience, answer the questions.  |              |
| <b>C-1 :</b>  | Ability to use modern information technologies.  |              |
| <b>AR- 1:</b> | Independence, responsibility.  |              |
| <b>Kn -1:</b> | Writing reports, making a presentation, using literature, using internet.  | <i>PR-17</i> |
| <b>Ab-1:</b>  | Submit a report, to speak to an audience, answer the questions.  |              |
| <b>C-1 :</b>  | Ability to use modern information technology.<br>Ability to plan and implement measures for the prevention of ENT diseases.<br>Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of ENT diseases.  |              |
| <b>AR- 1:</b> | Independence, responsibility.  |              |
| <b>Kn-1:</b>  | Writing reports, making a presentation, using literature, using internet.  | <i>PR-18</i> |
| <b>Ab-1:</b>  | Submit a report, to speak to an audience, answer the questions   |              |
| <b>C-1 :</b>  | Ability to use modern information technology.<br>Ability to plan and implement measures for the prevention of ENT diseases.<br>Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of ENT diseases. Ability to maintain regulatory medical records. Processing of state, social and medical information.<br>Ability to organize and conduct rehabilitation activities and care for patients with ENT diseases. Ability to provide legal support for one's own professional activity. |              |
| <b>AR- 1:</b> | Independence, responsibility.  |              |
| <b>Kn -1:</b> | Writing reports, making a presentation, using literature, using internet.  | <i>PR-19</i> |
| <b>Ab-1:</b>  | Submit a report, to speak to an audience, answer the questions.  |              |
| <b>C-1 :</b>  | Ability to use modern information technology.<br>Ability to plan and implement measures for the prevention of ENT diseases.<br>Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of ENT diseases. Ability to maintain regulatory medical records. Processing of state, social and medical information.<br>Ability to organize and conduct rehabilitation activities and care for patients with ENT diseases. Ability to provide legal support for one's own professional activity. |              |
| <b>AR- 1:</b> | Independence, responsibility.  |              |
| <b>Kn -1:</b> | Writing reports, making a presentation, using literature, using internet.  | <i>PR-20</i> |

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|---------------|---|--------------|
| <b>Ab-1:</b>  | Submit a report, to speak to an audience, answer the questions.   |              |
| <b>C-1 :</b>  | Ability to use modern information technology.<br>Ability to plan and implement measures for the prevention of ENT diseases. Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of ENT diseases.<br>Ability to maintain regulatory medical records.<br>Processing of state, social and medical information.<br>Ability to organize and conduct rehabilitation activities and care for patients with ENT diseases. Ability to provide legal support for one's own professional activity. |              |
| <b>AR- 1:</b> | Independence, responsibility.   |              |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan, how to perform manipulations, use of anesthesia.   | <i>PR-21</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |              |
| <b>C-1 :</b>  | Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.<br>Ability to apply knowledge in practice. Registration of the patient's medical history, diagnosis, treatment.   |              |
| <b>AR- 1:</b> | Independence, responsibility.   |              |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan, perform manipulations using anesthesia.  | <i>PR-22</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |              |
| <b>C-1 :</b>  | Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.<br>Ability to apply knowledge to practical activities. Ability to determine the management of patients with diseases of the ENT organs with concomitant somatic diseases.<br>Ability to perform medical manipulations. Registration of the patient's medical history, diagnosis, treatment.   |              |
| <b>AR- 1:</b> | Independence, responsibility.   |              |
| <b>Kn -1:</b> | Describe and collect complaints, medical history of the patient's life, conduct an examination, draw up an examination plan, treatment plan, perform manipulations using anesthesia   | <i>PR-23</i> |
| <b>Ab-1:</b>  | To evaluate the results of the ENT examination.   |              |
| <b>C-1:</b>   | Ability to abstract thinking, analysis and synthesis. Knowledge and understanding of the subject area and understanding of professional activity.<br>Ability to apply knowledge in practice. Ability to determine the management of patients with diseases of the ENT organs with concomitant somatic diseases.<br>Ability to perform medical manipulations. Ability to treat major diseases of the ENT organs. Registration of the patient's medical history, diagnosis, treatment   |              |
| <b>AR- 1:</b> | Independence, responsibility.   |              |

### **Program results of study (PR)**

1. To reveal and identify the leading clinical symptoms and syndromes; according to standard methods, using preliminary data of the patient's anamnesis, data of the patient's examination, knowledge about the person, his organs and systems, to establish a probable nosological or syndromic preliminary clinical diagnosis of ENT disease.
2. Collect information about the general condition of the patient, assess the psychomotor and physical development of the patient, the condition of the ENT organs, based on the results of laboratory and instrumental studies to assess information about the diagnosis.
3. Prescribe and analyze additional (mandatory and optional) methods of examination (laboratory, radiological, functional and / or instrumental), patients with diseases of the ENT organs for differential diagnosis of diseases.
4. To determine the final clinical diagnosis in accordance with the relevant ethical and legal norms, by making an informed decision and logical analysis of the obtained subjective and objective data of clinical, additional examination, differential diagnosis under the supervision of a doctor in a medical institution.
5. To diagnose emergencies under any circumstances (at home, on the street, in a medical institution), in an emergency, martial law, lack of information and limited time.
6. Plan and implement measures for the prevention of ENT diseases among the population to prevent the spread of ENT diseases.
7. Analyze the epidemiological situation and carry out measures of mass and individual, general and local drug and non-drug prevention of otorhinolaryngological diseases.
8. To determine the approach, plan, type and principle of treatment of ENT disease by making an informed decision according to existing algorithms and standard schemes.
9. Determine the mode of work, rest and the necessary diet in the treatment of ENT diseases on the basis of preliminary or final clinical diagnosis by making an informed decision according to existing algorithms and standard schemes.
10. To determine the tactics of patient management in ENT pathology by making an informed decision according to existing algorithms and standard schemes.
11. Carry out treatment of the main ENT diseases according to the existing algorithms and standard schemes under the control of the doctor-manager in the medical institution.
12. To organize carrying out of medical and evacuation actions among the population, military men, in the conditions of an emergency situation, including martial law, during the detailed stages of medical evacuation, taking into account the existing system of medical and evacuation support.
13. Determine the tactics of emergency medical care, using the recommended algorithms, under any circumstances on the basis of the diagnosis of an emergency in a limited time.
14. Analyze and evaluate state, social and medical information using standard approaches and computer information technologies.
15. Assess the impact of the environment on the health of the population in a medical institution by standard methods.
16. To form the purposes and to define structure of personal activity on the basis of result of the analysis of certain public and personal needs.
17. Adhere to a healthy lifestyle, use the techniques of self-regulation and self-control.
18. To be aware of and guided in their activities by civil rights, freedoms and responsibilities, to raise the general cultural level.
19. Adhere to the requirements of ethics, bioethics and deontology in their professional activities.
20. Organize the necessary level of individual safety (own and persons cared for) in case of typical dangerous situations in the individual field of activity.
21. Perform medical manipulations on the basis of preliminary and / or final clinical diagnosis for different segments of the population and in different conditions.
22. Perform medical ENT manipulations on the basis of preliminary and / or final clinical diagnosis for different segments of the population and in different conditions.

23. Manipulate the provision of emergency medical care, using standard schemes, under any circumstances on the basis of a diagnosis of emergency in a limited time.

### 6. Discipline format and scope

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|--|-----------------|------------------|
| Discipline format (full-time / parttime) | Full-time       |                  |
| Type of classes                          | Number of hours | Number of groups |
| Lectures (full-time)                     | 8               |                  |
| Practical classes (full-time)            | 37              |                  |
| Self-reliance (full-time)                | 45              |                  |

### 7. Topics and scope of the discipline

| Code of the class type         | Topic  | Scope of study  | Code of the result of study   | Teaching staff  |
|--------------------------------|--|---|---|---|
| <i>L-1 (lecture 1)</i>         | <ol style="list-style-type: none"> <li>External otitis. Acute purulent otitis media. Mastoiditis. Chronic otitis media. Otogenic intracranial complications.</li> <li>Nose and paranasal sinuses diseases. Rhinogenic orbital and intracranial complications.</li> <li>Acute and chronic tonsillitis. Complications. Laryngeal diseases</li> <li>ENT emergencies.</li> </ol>   | <p>Presentation of lecture material using multimedia support.</p> <p>Outlining problematic issues.</p> <p>Providing answers to questions.</p> | <p>Kn-1, Ab-1, C-1, AR-1</p> <p>Kn-1, Ab-1, Ab-3, Ab-4, Ab-6, C-1, AR-1, AR-2</p> <p>Kn-1, Ab-1, Ab-2, Ab-3, Ab-4, C-1, C-2, AR-1, AR</p> | <p>Moskalyk O.Ye.</p> <p>Barylyak A.Yu</p> <p>Tsymar A.V.</p>   |
| <i>P-1 (practical class 1)</i> | <ol style="list-style-type: none"> <li>Endoscopic examination of ENT. Clinical anatomy, physiology, methods of investigation of external and middle ear.</li> <li>Clinical anatomy, physiology, methods of investigation of hearing and vestibular apparatus.</li> <li>Clinical anatomy, physiology, methods of investigation of nose, paranasal sinuses, pharynx, larynx, bronchi and esophagus. Chemosensory and sinonasal dysfunction due to SARS-CoV-2 (COVID-19).</li> <li>Diseases of the external and middle ear. Acute purulent otitis media. Mastoiditis.</li> <li>Chronic purulent otitis media and its complications. Labyrinthitis. Otogenic intracranial complications.</li> <li>Nonpurulent ear diseases.</li> </ol> | <p>Oral and written testing</p>   | <p>Kn-1, Ab-1, Ab-2, Ab-3, Ab-4, C-1, C-2, AR-1, AR-2</p>   | <p>Moskalyk O.Ye.</p> <p>Tsymar A.V.</p> <p>Barylyak A.Yu.</p> <p>Chormiy O.V.</p> <p>Haevskyi V.Yu.</p> <p>Semenyuk O.O.</p> <p>Tynitovska O.I.</p> <p>Kruk M.M.</p> |

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|   | <ol style="list-style-type: none"> <li>7. Acute and chronic nose diseases.</li> <li>8. Acute and chronic diseases of the paranasal sinuses (including symptoms of SARS-CoV-2 (COVID-19)). Rhinogenic intracranial and orbital complications.</li> <li>9. Acute pharyngeal diseases.</li> <li>10. Chronic pharyngeal diseases.</li> <li>11. Acute and chronic laryngeal diseases.</li> <li>12. Traumas, foreign bodies and hemorrhages of the ENT, airways and esophagus, urgent care.</li> <li>13. Tumors of the ENT organs. Infectious granulomas of the upper airways.</li> </ol>   |                                |  |                                       |
| <p><i>SRW-1 (self-reliant work 1)</i></p> | <ol style="list-style-type: none"> <li>1. Differential diagnosis of sound conduction and sound perception disorders.</li> <li>2. Otitic intracranial complications, otogenic sepsis.</li> <li>3. Nasal valve, osteomeatal complex.</li> <li>4. Deformation of the external nose, rhinoplasty.</li> <li>5. Functional voice disorders.</li> <li>6. Physiology of lymph adenoid pharyngeal ring</li> <li>7. Methods of olfactory research. Olfactory disorders due to SARS-CoV-2 (COVID-19). Rehabilitation methods for olfactory disorders.</li> <li>8. Allergic diseases of the ENT organs.</li> <li>9. Mycosis of the ENT organs.</li> <li>10. Complications of acute tonsillitis</li> <li>11. Phytotherapy in otorhinolaryngology.</li> <li>12. Physiotherapy in otorhinolaryngology.</li> <li>13. Nasal bleedings.</li> <li>14. Foreign bodies of the ENT organs.</li> </ol> | <p>abstract, presentations</p> | <p>Kn-1, Ab1, Ab-2Ab-4, C-1, C-2, AR-1, AR-2</p> | <p>Barylyak A. Yu. Semenyuk O. O.</p> |

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| 15. | Pharyngeal cancer.              |  |  |
| 16. | Premalignant laryngeal lesions. |  |  |

## 8. Results of study verification

### Current control.

During the "Otorhinolaryngology" students have the opportunity to work with models, which practice methods of diagnosis and treatment of certain ENT pathologies. In practical classes, videos are shown where teachers of the department describe the fundamental moments in the anatomy and physiology of the ENT organs, as well as methods of diagnosis of ENT diseases. In addition, clinical analyzes of individual situations are carried out on the examples of patients of the clinic. Students supervise patients and write a medical history. At each practical lesson, each student solves a situational problem of the KROK-2 format.

Current control is carried out on the basis of a comprehensive assessment of the student's activities and acquired competencies (knowledge, skills, abilities, etc.), which includes control of entry level of knowledge, quality of practical work, level of theoretical training and results of exit level control. Forms of current control are determined by the Department of Otorhinolaryngology and are reflected in the curriculum of the discipline "Otorhinolaryngology". Assessment of current student performance is carried out at each practical lesson on a 4-point scale using approved assessment criteria for the discipline and is recorded in the journal of academic performance. This takes into account all types of work and the list of competencies provided by the curriculum and methodological development for the study of the topic. The student must receive a grade for each topic.

Students' knowledge is assessed from both theoretical and practical training according to the following **criteria:**

**5/«Excellent»** – the student has mastered the theoretical material, demonstrates deep and comprehensive knowledge of the topic or discipline, the main provisions of scientific sources and recommended literature, logically thinks and builds the answer, freely uses the acquired theoretical knowledge in the analysis of practical material, expresses his attitude to certain problems, demonstrates a high level of mastery of practical skills;

**4/«Good»** – the student has mastered the theoretical material, has the basic aspects of primary sources and recommended literature, argues it; has practical skills, expresses his views on certain issues, but assumes certain inaccuracies and errors in the logic of the presentation of theoretical content or in the analysis of practical;

**3/«Satisfactory»** – the student has mainly mastered the theoretical knowledge of the discipline, navigates in the primary sources and recommended literature, but unconvincingly answers, confuses concepts, additional questions cause the student uncertainty or lack of stable knowledge of a practical nature, shows inaccuracy in knowledge, can not assess facts and phenomena, to connect them with future activities;

**2/«Unsatisfactory»** – the student has not mastered the study material of the topic (discipline), does not know the scientific facts, definitions, almost does not navigate in the original sources and recommended literature, there is no scientific thinking, practical skills are not formed.

Repassings are carried out by prior registration of students at the department in the relevant journal. The order of working off missed classes is determined by the Department of Otorhinolaryngology. The duration and criteria for assessing students' knowledge during the practical lesson should be the same as in the relevant lesson.

The current control of the results of the tasks of independent work is carried out during the current control of the topic in the relevant lesson.

Criteria for evaluating each component of current control and specific forms of control measures are defined in the curriculum and reflected in the relevant methodological materials. The department informs students about the procedure, content and criteria of current control at the first lesson of the discipline.

| <p>The results of the student's work evaluation during the semester should be documented in the Journal of attendance and student performance, as well as entered in the test-examination sheet, student's study card, student's record book.</p> <p>Theoretical knowledge - test tasks, individual survey, interview, written work, situational tasks. Practical skills and abilities - independent performance of examination and treatment of patients and the ability to draw conclusions the ability to independently perform individual examinations of manipulation, writing case histories.</p> <p>Assessment of student performance in the discipline of otorhinolaryngology is a rating and is set on a multi-point scale as the arithmetic mean of the module and is determined by the ECTS system and the traditional scale adopted in Ukraine.</p> |                          |  |   |
|---|--------------------------|--|---|
| <i>Result of study code</i>   | <i>Code of the class</i> | <i>Result of study verification method</i>   | <i>Enrollment criteria</i>                |
| <p><b><i>Kn-1</i></b><br/> 1. Methods and examination of otorhinolaryngological patient.<br/> 2. Endoscopic picture of ENT organs.<br/> <b><i>Ab-1</i></b><br/> 1. Use a front reflector and front illuminator.<br/> 2. Carry out anterior rhinoscopy, anterior rhinoscopy, posterior rhinoscopy, oropharyngoscopy, indirect laryngoscopy, otoscopy.</p>  | <i>P-1</i>               | <p><b><i>Topic 1.</i></b><br/> 1. Determination of the initial level of knowledge of students in anatomy and physiology of ENT organs.<br/> 2. Determining the final level of students' knowledge.<br/> 3. Solving situational problems, working with test tasks.<br/> 4. Independent work of students, mastering practical skills.<br/> 5. Writing self-training.</p> | Evaluation on a 4-point (national) scale. |
| <p><b><i>Kn-1</i></b><br/> 1. Methods and examination of hearing and vestibular apparatus.<br/> 2. Clinical anatomy, physiology, research methods of the outer middle and inner ear<br/> <b><i>Ab-1</i></b><br/> 1. Carry out otoscopy/<br/> 3. Investigate hearing with the help of "living" language and tuning forks.<br/> 4. Evaluate the typical types of audiograms in the norm, in case of violation of the sound conduction, sound perception apparatus and their combined damage.</p>  | <i>P-2</i>               | <p><b><i>Topic 1.</i></b><br/> 1. Determination of the initial level of knowledge of students in anatomy and physiology of ENT organs.<br/> 2. Determining the final level of students' knowledge.<br/> 3. Solving situational problems, working with test tasks.<br/> 4. Independent work of students, mastering practical skills.<br/> 5. Writing self-training.</p> | Evaluation on a 4-point (national) scale. |
| <p><b><i>Kn -1</i></b><br/> 1. Clinical anatomy of the nose, paranasal sinuses, pharynx and larynx, as well as their relationship.<br/> 2. Physiology of the nose, paranasal sinuses, pharynx and larynx.<br/> 3. Methods of research of these organs.<br/> <b><i>Ab-1</i></b><br/> 1. Be able to assess the condition of the mucous membrane of the nasal cavities, pharynx and larynx.<br/> 2. Carry out the analysis of radiographs of the nose and paranasal sinuses, CT and MRI examination.</p>   | <i>P-3</i>               | <p><b><i>Topic 3</i></b><br/> 1. Determining the final level of knowledge of students.<br/> 2. Solving situational problems, working with test tasks.<br/> 3. Independent work of students, mastering practical skills.<br/> 4. Writing self-training.</p>   | Evaluation on a 4-point (national) scale. |



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| <p>3. Perform manipulations in the nasal cavity, pharynx and larynx.</p>   |            |   |  |
| <p><b>Kn -1</b><br/> 1. Etiology, pathogenesis of earwax, otitis externa, acute purulent otitis media and mastoiditis.<br/> 2. Clinic and diagnosis of these diseases.<br/> 3. Principles of treatment of ear diseases.<br/> <b>Ab-1</b><br/> 1. On the basis of complaints and medical history of the patient to choose the symptoms that give reason to suspect the presence of earwax, otitis externa, acute purulent otitis media or mastoiditis.<br/> 2. Perform otoscopy, assess the condition of the eardrum.<br/> 3. Evaluate and compare the most informative objective signs that confirm the patient's diagnosis of otitis externa or otitis media, mastoiditis.<br/> 4. Perform hearing research, evaluate the data of acu- and audiometric research.<br/> 5. Evaluate the data of X-ray examination of the temporal bone by the method of Schuler, CT of the temporal bone.</p> | <p>P-4</p> | <p><b>Topic 4</b><br/> 1. Determining the final level of knowledge of students.<br/> 2. Solving situational problems, working with test tasks.<br/> 3. Independent work of students, mastering practical skills.<br/> 4. Writing self-training.</p> | <p>Evaluation on a 4-point (national) scale.</p> |
| <p><b>Kn -1</b><br/> 1. Etiology, pathogenesis, chronic purulent otitis media and complications. Non-purulent ear diseases.<br/> 2. Clinic and methods of diagnosis of these diseases<br/> 3. Principles of their treatment and prevention.<br/> <b>Ab-1</b><br/> 1. Choose the symptoms that make it possible to suspect chronic ear diseases.<br/> 2. Perform hearing research, evaluate acu-, audiometry data<br/> 3. Evaluate the data of X-ray examination of the temporal bone by the method of Schuler.</p>   | <p>P-5</p> | <p><b>Topic 5</b><br/> 1. Determining the final level of knowledge of students.<br/> 2. Solving situational problems, working with test tasks.<br/> 3. Independent work of students, mastering practical skills.<br/> 4. Writing self-training.</p> | <p>Evaluation on a 4-point (national) scale.</p> |
| <p><b>Kn -1</b><br/> 1. Etiology, pathogenesis of non-purulent ear diseases.<br/> 2. Clinic and methods of diagnosis of these diseases<br/> 3. Principles of their treatment and prevention.<br/> <b>Ab-1</b><br/> 1. Choose the symptoms that make it possible to suspect non-purulent ear diseases.</p>  | <p>P-6</p> | <p><b>Topic 6</b><br/> 1. Determining the final level of knowledge of students.<br/> 2. Solving situational problems, working with test tasks.<br/> 3. Independent work of students, mastering practical skills.<br/> 4. Writing self-training.</p> | <p>Evaluation on a 4-point (national) scale.</p> |

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| <p>2. Perform hearing research, evaluate audiometry data</p> <p>3. Evaluate the data of X-ray examination of the temporal bone by the method of Schuler.</p>   |     |   |   |
| <p><b>Kn -1</b></p> <p>1. Etiology and pathogenesis, clinic and methods of diagnosis, diseases of the nose.</p> <p>2. Types of conservative and indications and principles of surgery for diseases of the nose.</p> <p><b>Ab-1</b></p> <p>1. Perform a study of nasal breathing and olfactory function.</p> <p>2. Evaluate the data of radiography of the paranasal sinuses, computed tomography or magnetic resonance imaging.</p> <p>3. Evaluate the data of laboratory research methods.</p> <p>4. Make a plan for examination and treatment of a patient with nasal pathology.</p>   | P-7 | <p><b>Topic 7</b></p> <p>1. Determining the final level of knowledge of students.</p> <p>2. Solving situational problems, working with test tasks.</p> <p>3. Independent work of students, mastering practical skills.</p> <p>4. Writing self-training.</p> | Evaluation on a 4-point (national) scale. |
| <p><b>Kn -1</b></p> <p>1. Etiology and pathogenesis, clinic and methods of diagnosis, diseases of the the paranasal sinuses (including symptoms of SARS-CoV-2 (COVID-19)). Rhinogenic intracranial and orbital complications..</p> <p>2. Types of conservative and indications and principles of surgery for diseases of the nose.</p> <p><b>Ab-1</b></p> <p>1. Evaluate the data of radiography of the paranasal sinuses, computed tomography or magnetic resonance imaging.</p> <p>2. Evaluate the data of laboratory research methods.</p> <p>3. Make a plan for examination and treatment of a patient with nasal pathology.</p> | P-8 | <p><b>Topic 8</b></p> <p>1. Determining the final level of knowledge of students.</p> <p>2. Solving situational problems, working with test tasks.</p> <p>3. Independent work of students, mastering practical skills.</p> <p>4. Writing self-training.</p> | Evaluation on a 4-point (national) scale. |
| <p><b>Kn -1</b></p> <p>1. Etiology, pathogenesis, causes of acute pharyngeal diseases, clinic and principles of treatment of acute pharyngitis, acute tonsillitis.</p> <p>2. Conservative and surgical treatments.</p> <p><b>Ab-1</b></p> <p>1. To examine patients with pharyngeal pathology.</p> <p>2. To establish the preliminary diagnosis and to be able to carry out differential diagnosis of pharyngitis, sore throat, diphtheria, paratonsillar and pharyngeal</p>   | P-9 | <p><b>Topic 9</b></p> <p>1. Determining the final level of knowledge of students.</p> <p>2. Solving situational problems, working with test tasks.</p> <p>3. Independent work of students, mastering practical skills.</p> <p>4. Writing self-training.</p> | Evaluation on a 4-point (national) scale. |

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| <p>abscesses, appropriate treatment of these diseases, to make the scheme of treatment of patients with chronic tonsillitis.</p> <p>3. Carry out manipulations: taking swabs from the nose and throat, lubrication, irrigation and insufflation of the pharynx with drugs, washing the gaps</p>   |             |  |  |
| <p><b>Kn -1</b></p> <p>1. Etiology, pathogenesis, causes of chronic pharyngeal diseases, clinic and principles of treatment of chronic pharyngitis, chronic tonsillitis.</p> <p>2. Conservative and surgical treatments.</p> <p><b>Ab-1</b></p> <p>1. To examine patients with chronic pharyngeal pathology.</p> <p>2. To establish the preliminary diagnosis and to be able to carry out differential diagnosis of pharyngitis, sore throat, diphtheria, paratonsillar and pharyngeal abscesses, appropriate treatment of these diseases, to make the scheme of treatment of patients with chronic tonsillitis.</p> <p>3. Carry out manipulations: taking swabs from the nose and throat, lubrication, irrigation and insufflation of the pharynx with drugs, washing the gaps</p> | <p>P-10</p> | <p><b>Topic 9</b></p> <p>1. Determining the final level of knowledge of students.</p> <p>2. Solving situational problems, working with test tasks.</p> <p>3. Independent work of students, mastering practical skills.</p> <p>4. Writing self-training.</p>  | <p>Evaluation on a 4-point (national) scale.</p> |
| <p><b>Kn -1</b></p> <p>1. Causes of laryngeal diseases.</p> <p>2. Methods of emergency care for edema and laryngeal stenosis.</p> <p>3. Technique of tracheostomy, conicotomy, indications for prolonged intubation.</p> <p><b>Ab-1</b></p> <p>1. Conduct a survey.</p> <p>2. To establish the diagnosis.</p> <p>3. Prescribe treatment: performing tracheostomy, conicotomy, indications for prolonged intubation and tracheostomy.</p>  | <p>P-11</p> | <p><b>Topic 11</b></p> <p>1. Determining the final level of knowledge of students.</p> <p>2. Solving situational problems, working with test tasks.</p> <p>3. Independent work of students, mastering practical skills.</p> <p>4. Writing self-training.</p> | <p>Evaluation on a 4-point (national) scale.</p> |
| <p><b>Kn -1</b></p> <p>1. Mechanisms and types of injuries, foreign bodies, bleeding from the ENT organs.</p> <p>2. Clinic and diagnosis of these diseases.</p> <p>3. Principles of treatment and emergency care.</p> <p><b>Ab-1</b></p> <p>1. Examine the nose, pharynx and larynx.</p> <p>2. Highlight the most informative and</p>   | <p>P-12</p> | <p><b>Topic 12</b></p> <p>1. Determining the final level of knowledge of students.</p> <p>2. Solving situational problems, working with test tasks.</p> <p>3. Independent work of students, mastering practical skills.</p> <p>4. Writing self-training.</p> | <p>Evaluation on a 4-point (national) scale.</p> |

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| <p>objective signs that confirm the presence of foreign bodies, injuries, bleeding.</p> <p>3. Evaluate the data of radiographs, computed tomography and magnetic resonance imaging.</p> <p>4. To make the plan of treatment of the patient with this pathology.</p> <p>5. Remove foreign bodies from the ear, nose and pharynx.</p>   |   |  |  |
| <p><b>Kn -1</b></p> <p>1. Causes of tumors of the ENT organs. Infectious granulomas of the upper airways.</p> <p>2. Clinic and diagnosis of these diseases.</p> <p>3. Principles of treatment and emergency care.</p> <p><b>Ab-1</b></p> <p>1. Conduct a survey.</p> <p>2. To establish the diagnosis.</p> <p>3. Prescribe treatment: performing tracheostomy, conicotomy, indications for prolonged intubation and tracheostomy.</p> | <p><i>P-13</i></p>                        | <p><b>Topic 13</b></p> <p>1. Determining the final level of knowledge of students.</p> <p>2. Solving situational problems, working with test tasks.</p> <p>3. Independent work of students, mastering practical skills.</p> <p>4. Writing self-training.</p> | <p>Evaluation on a 4-point (national) scale.</p>   |
| <p><b>Code of the class type</b></p>  | <p><b>Code of the result of study</b></p> | <p><b>Method of verification of learning outcomes</b></p>  | <p><b>Enrollment criteria</b></p>  |
| <p>Kn-1</p> <p>1. External otitis. Acute purulent otitis media. Mastoiditis. Chronic otitis media. Orogenic intracranial complications.</p> <p>2. Nose and paranasal sinuses diseases. Rhinogenic orbital and intracranial complications.</p> <p>3. Acute and chronic tonsillitis. Complications. Laryngeal diseases</p> <p>4. ENT emergencies.</p>   | <p><i>L-1</i></p>                         | <p>1. Writing self-training.</p> <p>2. Independent work of students.</p> <p>3. Using the misa system</p>   | <p>Missed lectures are not completed, but are included in the total number of missed classes in the discipline of otorhinolaryngology. Additional questions on the test are added.</p> |

| <i>Code of the class type</i>  | <i>Code of the result of study</i>   | <i>Method of verification of learning outcomes</i>  | <i>Enrollment criteria</i>   |
|--|--|---|--|
| <b><i>Kn-1</i></b><br>1. Differential diagnosis of sound conduction and sound perception disorders.<br>2. Otogenic intracranial complications, otogenic sepsis.<br>3. Nasal valve, osteomeatal complex.<br>4. Deformation of the external nose, rhinoplasty.<br>5. Functional voice disorders.<br>6. Physiology of lymph adenoid pharyngeal ring<br>7. Methods of olfactory research. Olfactory disorders due to SARS-CoV-2 (COVID-19). Rehabilitation methods for olfactory disorders.<br>8. Allergic diseases of the ENT organs.<br>9. Mycosis of the ENT organs.<br>10. Complications of acute tonsillitis<br>11. Phytotherapy in otorhinolaryngology.<br>12. Physiotherapy in otorhinolaryngology.<br>13. Nasal bleedings.<br>14. Foreign bodies of the ENT organs.<br>15. Pharyngeal cancer.<br>16. Premalignant laryngeal lesions. | SRW-1  | 1. Writing self-training.<br>2. Independent work of students.<br>3. Using the misa system | Independent works are included in the total number of classes in the discipline. Evaluated on a two-point scale: "credited" or "not credited". |
| <b>Final control</b>   |  |   |  |
| <b>General evaluation system</b>   | Participation to the classes during the semester – 60%/40% on a 200-point scale.   |   |  |
| <b>Evaluation scales</b>   | Traditional 4-point scale, multi-point (200-point) scale, ECTS rating scale.   |   |  |
| <b>Conditions of admission to the final control</b>  | The student attended all practical (laboratory, seminar) classes and received at least 120 points for current performance. |   |  |
| <b>Type of final control</b>   | <b>Methods of final control</b>  | <b>Enrollment criteria</b>  |  |

|                            |  |  |
|----------------------------|--|--|
| <b>Differential credit</b> | It is necessary to enroll all topics submitted for current control. Grades from the 4-point scale are converted into points on a multi-point (200-point) scale in accordance with the Regulation “Criteria, rules and procedures for evaluating the results of students’ learning activities”. | <b>The maximum number of points</b> that a student can score for the current academic activity for admission to the exam / differentiated test is 120 points.<br><b>The minimum number of points</b> that a student must score for the current academic activity for admission to the exam / differentiated test is 72 points. |
|----------------------------|--|--|

**The calculation of the number of points** is based on the grades obtained by the student on the traditional scale during the study of the discipline, by calculating the arithmetic mean (CA), rounded to two decimal places. The value obtained is converted into points on a multi-point scale as follows:

$$x = \frac{CA \times 120}{5}$$

Recalculation of the average score for current activities in a multi-point scale

| 4-point scale | 200-point scale | 4-point scale | 200-point scale | 4-point scale | 200-point scale | 4-point scale | 200-point scale   |
|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|-------------------|
| 5             | 120             | 4.45          | 107             | 3.91          | 94              | 3.37          | 81                |
| 4.95          | 119             | 4.41          | 106             | 3.87          | 93              | 3.33          | 80                |
| 4.91          | 118             | 4.37          | 105             | 3.83          | 92              | 3.29          | 79                |
| 4.87          | 117             | 4.33          | 104             | 3.79          | 91              | 3.25          | 78                |
| 4.83          | 116             | 4.29          | 103             | 3.74          | 90              | 3.2           | 77                |
| 4.79          | 115             | 4.25          | 102             | 3.7           | 89              | 3.16          | 76                |
| 4.75          | 114             | 4.2           | 101             | 3.66          | 88              | 3.12          | 75                |
| 4.7           | 113             | 4.16          | 100             | 3.62          | 87              | 3.08          | 74                |
| 4.66          | 112             | 4.12          | 99              | 3.58          | 86              | 3.04          | 73                |
| 4.62          | 111             | 4.08          | 98              | 3.54          | 85              | 3             | 72                |
| 4.58          | 110             | 4.04          | 97              | 3.49          | 84              | <b>Less 3</b> | <b>Not enough</b> |
| 4.54          | 109             | 3.99          | 96              | 3.45          | 83              |               |                   |
| 4.5           | 108             | 3.95          | 95              | 3.41          | 82              |               |                   |

**Maximum scores** the student can receive for the final module control are 80.

**Minimal scores** the student can receive for the final module control are not less than 50 scores.

Forms of differential credit are standardized and include control of theoretical and practical training. The methods of their implementation and the criteria for assessing each type of examination tasks are reflected in the curriculum of otorhinolaryngology.

**CRITERIA FOR EVALUATION OF THEORETICAL ISSUES**

|        |                          |
|--------|--------------------------|
| scores | Components of evaluation |
|--------|--------------------------|

|    |   |
|----|---|
| 10 | Higher level of competence: the student has deeply and fully mastered the program material, competently, comprehensively and logically teaches it orally or in writing; at the same time knows the recommended literature, shows a creative approach and correctly substantiates the decisions made, has good versatile skills and abilities in performing practical tasks.   |
| 8  | High level of competence: the student knows the program material, competently and essentially teaches it orally or in writing, assuming minor errors in the evidence, interpretation of concepts and categories; at the same time has the necessary skills and abilities to perform practical tasks, there are some blots.  |
| 7  | Intermediate level of competence: the student knows the program material, competently teaches it orally or in writing, assuming inaccuracies in the evidence, interpretation of concepts and categories; at the same time has the necessary skills and abilities to perform practical tasks.  |
| 5  | Sufficient level of competence: the student knows only the basic program material, assumes inaccuracies, insufficiently clear formulations, inconsistency in the presentation of answers orally or in writing; at the same time he has insecure skills and abilities to perform practical tasks.  |
| 3  | The student knows only the basic program material, assumes gross inaccuracies, vaguely formulates and inconsistently gives answers orally or in writing; at the same time he has insecure skills and abilities to perform practical tasks.  |
| 2  | Insufficient level of competence: the student does not have the basic program material, makes gross mistakes that indicate a lack of understanding of the material, gives incorrect answers to questions; assumes fundamental errors in the evidence, interpretation of concepts and categories, does not have the basic skills and abilities to perform practical tasks, requires additional training in the discipline. |
| 0  | The student does not understand and does not orient in the material, does not answer questions; requires a repeat course of the discipline.   |

**CRITERIA FOR EVALUATION OF SOLUTION OF SITUATIONAL TASKS**

|                             |                              |
|-----------------------------|------------------------------|
| Task score:<br><br>(points) | Student evaluation criteria: |
|-----------------------------|------------------------------|

|   |  |
|---|--|
| <p style="text-align: center;">20<br/>(Excellent)</p>         | <p>The student clearly stated the diagnosis, including complications justified it; appointed a complete and necessary examination, and competently and fully prescribed treatment: conservative and surgical methods. The student has a deep systemic knowledge of the discipline and is aware of them as the only systematic knowledge. The answer is complete, the material is presented in a complete logical sequence.</p> |
| <p style="text-align: center;">15<br/>(Good)</p>              | <p>The student clearly stated the diagnosis, including complications justified it. The student has a thorough knowledge of the discipline, methods of research and treatment, but may admit inaccuracies in the structuring of methods of examination and treatment, and the selection of the content of educational material</p>  |
| <p style="text-align: center;">10<br/>(Satisfactory)</p>      | <p>The student as a whole correctly, but not precisely formulated the diagnosis, did not specify complications. The student knows the program material, has practical skills in designing the content of the study material, but makes two or three minor mistakes that are corrected independently. Diagnosis and treatment are not fully justified or prescribed incorrectly.</p>  |
| <p style="text-align: center;">5<br/>(Satisfactory)</p>       | <p>The student made an inaccurate diagnosis and did not indicate complications. His knowledge is fragmentary, has difficulty in giving examples in explaining phenomena and patterns. There are several significant mistakes in the appointment of examination and treatment. Does not know terminology.</p>   |
| <p style="text-align: center;">2 (0)<br/>(Unsatisfactory)</p> | <p>The student misdiagnosed the diagnosis or did not specify it. The student does not fully know the program material. Did not write answers to questions. Incorrectly formulated examination and treatment.</p>   |

**Assessment of individual student tasks.**

In cases where the program of the discipline provides for the performance of individual tasks, students are graded in accordance with the requirements of the program. Points for individual tasks are awarded to the student only if they are successfully completed and defended. They are added to the amount of points earned by the student in the classroom during the current academic activity. In no case may the total amount of points for the current educational activity exceed 120 points (for disciplines that end with a differential credit). Individual tasks performed by students are stored at the department for 1 year.

Discipline scores for students who have successfully completed the program are converted into a traditional 4-point scale according to the absolute criteria listed in the table below.



| Points in the discipline                                     | Score on a 4-point scale |
|--|--------------------------|
| 170-200  | 5                        |
| 140-169  | 4                        |
| 139 till minimal   | 3                        |
| Below the minimum number of points that a student must score | 2                        |

**Evaluation criteria for the discipline of otorhinolaryngology in the misa system.**

Teaching materials are used in the training.

Tasks for current control (not less than 10 test tasks on the topic of the lesson).

Evaluation criteria (50-60% correct answers - satisfactory, 70-80% - good, 90-100% excellent).

The structure of the examination ticket consists of: examination test tasks of different levels of difficulty and situational tasks for differential test online (option contains: 40 tasks with one correct answer and 40 tasks of extended choice)

| Test tasks:   | Scores:   |
|---|---|
| 40 test tasks with one correct answer                             | One test task is worth 1 point<br>(40 test tasks - 40 points) |
| 40 test tasks, 2 of them are situational tasks of extended choice | One test task is worth 1 point<br>(40 test tasks - 40 points) |
| Total: 80 test tasks  | Total: 80 points  |

**Final control:**

Final control is carried out after the completion of the study of all topics in the discipline of otorhinolaryngology.

The form of final control over the assessment of the student's assimilation of educational material in the discipline solely on the basis of the results of his performance of all educational work provided by the working curriculum. The form of final control in the discipline is a differential test, which is conducted at the last seminar. (According to the established schedule). Solve packages of test tasks and situational tasks, which include a basic test task with the help of 40 test tasks and 40 situational tasks.

Students who have completed all unsatisfactory grades and missions of practical and lecture classes are admitted to the differential test. The student makes a differential test with the number of points he has accumulated during the current study. Differential credit as a form of final control involves determining the skills and knowledge of students in otorhinolaryngology for the entire period of study of the discipline and is carried out as a separate control measure for tickets and test tasks in accordance with the working curriculum. When setting the grade for the discipline of otorhinolaryngology, the student's accumulated number of points for current education (maximum number of points - 120) and the result of the differential test in points (maximum number of points - 80) are taken into account. The student makes a differential test with the number of points he has accumulated during the current study.

Each ticket includes: test questions and situational tasks.

Test tasks include tests with one or more correct answers in anatomy, physiology and methods of examination of ENT organs. Situational tasks include questions about complaints, medical history, objective data, examination methods and methods of treatment and the ability to use them in the practice of the doctor, writing conclusions on the results of laboratory tests and examinations, the ability to predict the possible impact of these factors on health. I human and suggest preventive measures.

Checking the implementation of educational test tasks is carried out by the teacher who is responsible for the misa system.

|  |
|--|
| Evaluation of online testing is performed automatically with subsequent export visualization and analysis of results in Excel is stored electronically and duplicated on paper.  |
| <b>9. Course policy</b>  |
| <p>Mandatory observance of academic integrity by students, namely:</p> <ul style="list-style-type: none"> <li>- independent performance of all types of work, tasks, forms of control provided by the working program of this discipline;</li> <li>- links to sources of information in the case of the use of ideas, developments, statements, information;</li> </ul> <p>Classes that were missed by the student for any reason, are mastered by him independently in extracurricular time by writing a synopsis of the subject and solved a practical task. The student shows the syllabus of the missed lesson to the teacher during the next lesson or after the beginning of attending classes.</p> <p>Missed lectures are not completed, but are included in the total number of missed classes in the discipline. Upon receiving an unsatisfactory grade in the discipline, as well as skipping practical classes and lectures, the student is obliged to re-study it in extracurricular time, to pass the topic according to the calendar-thematic plan.</p>  |
| <b>10. Literature</b>  |
| <p><b>Basic:</b></p> <ol style="list-style-type: none"> <li>1. Otorhinolaryngology: textbook / Yu.V. Mitin, Yu.V. Deyeva, Ya.Yu. Gomza et al. — 6th edition. — Kyiv: «MEDICINE». — 2020. — 264 p.</li> </ol>   |
| <p><b>Additional:</b></p> <ol style="list-style-type: none"> <li>1. Cummings Otolaryngology: Head and Neck Surgery, Paul W. Flint; Bruce H. Haughey et al. - 7th edition. — Elsevier. — 2020. — 3568 p.</li> <li>2. ENT Secrets. Melissa A. Scholes, Vijay R. Ramakrishnan. — 5th edition. — Elsevier. — 2022. — 604 p.</li> <li>3. Roland, N. Key Topics in Otolaryngology and Head &amp; Neck Surgery/ ed. : N. Roland, D. McRae, A. W. McCombe. - 3rd ed. - Stuttgart ; New York : Thieme, 2019. - 490 p. : il. - Index: p. 479-490. — ISBN 978-3-13-240477-9</li> <li>4. Flint, P. W. Cummings Otolaryngology. Head and Neck Surgery : international edition / P. W. Flint, H. W. Francis, B. H. Haughey [et al.]. - 7th ed. - Philadelphia : Elsevier, 2021 - . - ISBN 978-0-323-61179-4. - Vol. 3. - 1316 p.</li> <li>5. Fokkens W.J., Lund V.J., Hopkins C. et al. (2020) European Position Paper on Rhinosinusitis and Nasal Polyps 2020. Rhinology, 58(Suppl. S29): 1–464. doi: 10.4193/Rhin20.600.</li> </ol>  |
| <b>11. Equipment material and technical and software of the discipline / course.</b>   |
| <p><b>Used in lectures:</b> diagrams, tables, slides, computer presentations.</p> <p><b>Used in practical classes:</b> tools for endoscopic examination of ENT organs: frontal reflector and frontal illuminator, nasal mirrors, spatulas, mirror for posterior rhinoscopy, laryngeal mirrors, ear funnels Set of radiographs and CT and MRI of the paranasal sinuses. Paracentesis needle, ear catheter, pneumatic funnel, Politzer balloon, Jeanne syringe. Instruments for surgical intervention, Kulikovsky needle, equipment and tools for optical endoscopy of the nasal cavity and paranasal sinuses. Test tubes for bacteriological research. Surgical tools for opening of pharyngeal abscesses. Standard set of tools for tonsillectomy. Tools for performing endoscopic examination of the larynx. Laryngeal syringe and nozzle for infusion of solutions into the larynx. Surgical tools: tracheo cannulas, a tool for taking a biopsy. Hooks and forceps to remove foreign bodies from the nose, pharynx and larynx. Tools for repositioning bone fragments of the nose, anterior and posterior tamponade of the nose.</p> <p><b>Available</b> computers, models (ear model), frontal reflectors, audiometer, otoscopes, ENT combine.</p> |
| <b>Methodical support</b>  |
| <p>In textbooks, lecture materials, guidelines updated sections of situational tasks, sections of test tasks for preliminary control in the discipline of "Otorhinolaryngology", updated list of questions for final control and a list of practical skills, thematic plans for independent work of students.</p> <ol style="list-style-type: none"> <li>1. Preparation materials for lectures.</li> <li>2. Lecture presentations.</li> </ol>  |

3. Materials of preparation for practical classes.
4. Methodical instructions for practical classes.
5. Task options for independent and individual work of students.
6. Test tasks for the final test control.
7. Test tasks for daily control.
8. Variants of theoretical questions for independent study.
9. Situational tasks for practical classes.
10. Situational tasks for final control.

## **12. Additional Information**

There is a student's research group at the Department. Responsible for the work of the scientific student group at the Department of Otorhinolaryngology - Tsimar A.V. (MD, PhD, associate professor)

[tsimdoc@gmail.com](mailto:tsimdoc@gmail.com)

During the academic year, the Department of Otorhinolaryngology holds meetings of the scientific circle, consultations of students. Circle members take part in cathedral student scientific conferences. Abstracts are published in student collections. The plan of work of a scientific student's group for 2021 academic year is made:

- a) discuss modern methods of diagnosis, prevention and treatment of ENT diseases;
- b) to take part in student scientific conferences in Lviv and other cities of Ukraine.
- c) to take part in student scientific conferences with international participation.

### **Information resources:**

1. <https://www.bmj.com/>
2. <https://www.uptodate.com/>
3. <https://www.clinicalkey.com/>
4. <https://www.osmosis.org/>
5. <https://3d4medical.com/>
6. <https://pubmed.ncbi.nlm.nih.gov/>
7. website of the National Library of Ukraine named after V.I. Vernadsky
8. -website of the National Scientific Medical Library of Ukraine
9. -An electronic database of scientific publications from the National Medical Library of the National Institutes of Health of the United States.
10. Educational portal of NMU named after O.O. Bogomolets.
11. <http://anatomia.at.ua/>
12. <http://www.anatomyatlases.org/>
13. <https://aclandanatomy.com/>
14. <http://www.anatomatlas.com/>
15. <http://www.healthline.com/human-body-maps>

### **Syllabus compiler:**

**MD, PhD, associate professor Tsimar A.V.**

### **Head of Department**

**MD, PhD, associate professor Moskalyk O.Ye.**