Poltava State Medical University
Department of Otorhinolaryngology with Ophthalmology

SYLLABUS
Endoscopic technologies in otorhinolaryngology
elective educational discipline

level of higher education	the second (master's) level of higher education
field of knowledge	22 «Healthcare»
specialty	222 «Medicine»
educational qualification	master of medicine
professional qualification	doctor
educational and professional program	«Medicine»
form of education	full-time
course(s) and semester(s) of study of academic discipline	6th course, XI-XII semester

Poltava – 2024

INFORMATION ABOUT TEACHERS WHO TEACH EDUCATIONAL DISCIPLINE

Surname, first name, patronymic of the teacher(s), academic degree, academic title	Bezega Mykhailo Ivanovich	Ph.D.	Head of the Department
	Bezshapochnyi Serhii Borisovych	MD, Professor	Professor
	Gasyuk Yurii Anatoliyovych	MD, Professor	Professor
	Loburets Valery Vasylovich	Ph.D.	Associate professor
	Podovzhnyi Oleksandr Hryhorovych	Ph.D.	Teacher
	Sonnik Nataliya Bohdanivna	Ph.D.	Associate professor
	Zachepylo Svitlana Victorivna	Ph.D.	Associate professor
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Profile of the teacher (teachers)	https://otorhin-ophthalm.pdmu.edu.ua/team		
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MAIN CHARACTERISTICS OF THE EDUCATIONAL DISCIPLINE
« Endoscopic technologies in otorhinolaryngology otorhinolaryngology»

The scope of the discipline «Endoscopic technologies in otorhinolaryngology»

Number of credits / hours – **3,0/90**, of which:

Practical classes (hours) - **30**

Independent work (hours) - **60**

Type of control: credit

Policy of the educational discipline

The policy of the academic discipline is determined by the system of requirements that scientific and practical workers impose on higher education students in the study of the clinical discipline "Endoscopic technologies in otorhinolaryngology", is based on the principles of academic integrity and is built taking into account the norms of the legislation of Ukraine, the Statute, provisions of the PSMU and other regulatory documents.

Learning outcomes obtained through non-formal and/or informal education are recognized in the formal education system in the manner prescribed by law.

The academic discipline is based on the conscious and conscientious performance of duties by higher education students/ applicants for higher education, compliance with the general rules and norms of behavior accepted in society.

Normative documents regulating the organization of the educational process at the department and at the university can be found at the link (https://www.pdmu.edu.ua/n-process/viddil-monitoryngu-osvity/informaciyi-materiali-n-process-vimo-ek9k).

Applicants for higher education are obliged to fully master the knowledge, skills, practical skills and competences in the discipline "Otorhinolaryngology", adhering to the principles of academic integrity - the Code of Academic Integrity of the Poltava State Medical University.
(https://www.pdmu.edu.ua/storage/n_process_vimo/docs_links/acuIqVmfy9EklnqGTDeNGxcZYY09NpWN3T2KFdps.pdf).

Applicants for higher education must adhere to the "Rules of internal procedure for students of PSMU". It is mandatory to systematically attend all types of training classes (except for good reasons), which are held according to the schedule according to the schedule of the educational process in accordance with the work training plans and the program of the discipline. Students of higher education must come to classes on time, according to the schedule, lateness to classes is not allowed.

The language of the educational process is the state language, and for international applicants for higher education, English or Russian is additionally available at their choice (determined according to their study contract).

During the educational process at the department, higher education students must be present in changeable medical clothing (gown and cap) and changeable shoes, clothing items must be clean and ironed.

During practical classes and lectures, students are prohibited from leaving the classroom without the permission of the teacher; using textbooks, manuals, notes, mobile phones or other electronic means that can transmit materials or provide information without teacher's permission; engaging in unauthorized activities, distracting other students and interfering with the teacher; committing immoral acts that degrade human dignity, use profanity; committing illegal acts; performing any actions that may create conditions dangerous to the health and/or life of others.

Working out of unsatisfactory grades at the Department of Otorhinolaryngology and Ophthalmology begins 2 weeks before the end of the semester and is carried out only when the applicant for higher education has an average score of the current module performance in the discipline less than 3.0

before reaching the minimum score for admission to the FMC. Obtaining positive grades on the topics of content modular controls and defense of medical history is a prerequisite for admission to FMC.

In order to comply with the rules of academic integrity while studying at the Department of Otorhinolaryngology and Ophthalmology, **applicants for higher education must:**

• independently perform educational tasks, tasks of current and final control of learning results;

• refer to sources of information in case of borrowing ideas, statements, information;

• provide reliable information about the results of one's own educational and scientific activities;

• comply with copyright legislation;

• provide reliable information about the results of one's own educational (scientific, creative) activities, used research methods and sources of information.

During their stay at the department, applicants for higher education must comply with the following requirements:

• adhere to a business style of clothing;

• maintain order in classes;

• be careful with the property (furniture, equipment) located in the educational premises of the department;

• not to take things and equipment out of the classrooms and premises of the department without the teacher's permission

• behave with dignity, tact, maintain patience and self-control.

When organizing the educational process at the Department of Otorhinolaryngology and Ophthalmology, teachers and applicants for higher education act in accordance with the following normative documents:

Regulations on the organization of the educational process at the Poltava State Medical University: https://www.pdmu.edu.ua/storage/department-npr/docs_links/0nrGNrEzksWWytpXV8j05INcg9wbyVjkYx9FrbEY.pdf

Rules of internal procedure of applicants for higher education at Poltava State Medical University: https://www.pdmu.edu.ua/storage/department-npr/docs_links/OaN2nwysLPFAUDRvuDPvFSpzM1j9E9CwQQkgr93b.pdf

Regulations on the organization and methodology of evaluating the educational activity of applicants for higher education at Poltava State Medical University: https://www.pdmu.edu.ua/storage/department-npr/docs_links/tswROM7KUS0XT7aEsz3ZJ1peVh33PidlmTM3uuyo.pdf

Regulations on the organization of independent work of applicants for higher education at Poltava State Medical University:

https://www.pdmu.edu.ua/storage/department-npr/docs_links/BGUZVLhZvFmIMvpYzHnEFfb9IIwhTrEjOaaFdpTd.pdf

Regulations on working out of missed classes and unsatisfactory grades by applicants for higher education at Poltava State Medical University.
https://www.pdmu.edu.ua/storage/department-npr/docs_links/d2v3WhcBOWnuedYRoBKRe7k1xnl4KtbB2r2NR2CG.pdf

If you do not agree with the results of the
of the final control, please read the "Regulations on the appeal of the results of the final control of knowledge of applicants for higher education"

https://www.pdmu.edu.ua/storage/department-npr/docs_links/DDgFa7zhzJAcNHnKamWyKPDd1P2msJNfrEAv36Bu.pdf

Description of the educational discipline (abstract)

The educational discipline "Endoscopic technologies in otorhinolaryngology" is aimed at providing higher education students with information about the latest endoscopic technologies that can be used to treat patients with otolaryngological pathology. The topics presented for consideration relate to modern aspects of the use of endoscopic devices in diagnostics, surgical interventions and postoperative treatment of patients.

The subject of study of the educational discipline "Endoscopic technologies in otorhinolaryngology" The subject of study of the educational discipline "Endoscopic technologies in otorhinolaryngology" is the basics of technical support of videoendoscopic interventions, methods of diagnosis, treatment and prevention of otorhinolaryngological pathology, methods of operative treatment using videoendoscopic technology and minimally invasive technologies, acquisition of basic practical skills. The discipline is taught to students of the VI course of the specialty: "Medicine". The discipline is adapted to the needs of clinical medicine and contains separate sections devoted to the use of the latest endoscopic technologies in otorhinolaryngology.

Prerequisites and postrequisites of the academic discipline (interdisciplinary connections)

Prerequisites. The study of the discipline "Endoscopic technologies in otorhinolaryngology" is based on the knowledge obtained by students of higher education in the following disciplines: human anatomy, physiology, pathophysiology, pathomorphology, social medicine, public health, pharmacology, general surgery, otorhinolaryngology.

Postrequisites. The study of the discipline "Endoscopic technologies in otorhinolaryngology" lays the foundations for the further study by students of higher

education of such disciplines as internal medicine, emergency and urgent medical care, occupational diseases and forms the ability to apply the acquired knowledge in the process of professional activity at the level of general practitioner doctor.

The purpose and tasks of the educational discipline

The purpose of teaching the educational discipline "Endoscopic technologies in otorhinolaryngology" is to acquiring knowledge of the anatomy and physiology of the ENT organs, etiological factors and pathogenetic mechanisms of diseases of the ENT organs, clinical signs, methods of diagnosis, treatment and prevention of otorhinolaryngological pathology, mastering by students of higher education the necessary skills and abilities that correspond to the ultimate goals of studying the educational discipline.

The main tasks of studying the discipline "Endoscopic technologies in otorhinolaryngology" are:

-To form among students of higher education a system of theoretical knowledge regarding the possibility of using the latest video endoscopic methods for the diagnosis and treatment of diseases of the otorhinolaryngological profile;

- Formation of skills for preparing patients for endoscopic interventions, communication skills and interaction with the team, colleagues, patients and relatives, skills for working with medical documentation;

- To provide practical knowledge and skills regarding the use of endoscopic technologies in otorhinolaryngology;

- To Form the ability to analyze the anamnestic and clinical data of the patient, interpret the results of laboratory, instrumental and additional research methods, establish a preliminary, clinical, final diagnosis, determine the tactics of treatment of patients with diseases of the ENT organs and their complications with the possible use of endoscopic equipment.

Competencies and learning outcomes in accordance with the educational and professional program, the formation of which is facilitated by the educational discipline (integral, general, special)

In accordance with the requirements of the EPP "Medicine", the discipline ensures that students of higher education acquire the following competencies:

Integral competence:

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

General competencies:

1. Ability to abstract thinking, analysis and synthesis, ability to learn and master modern knowledge.

2. Ability to apply knowledge in practical situations.

3. Knowledge and understanding of the subject field and understanding of professional activity.

4. Ability to adapt and act in a new situation.

5. Ability to make informed decisions; work in a team; interpersonal communication skills.

6. Ability to communicate in the state language both orally and in writing; the ability to communicate in a foreign language. Ability to use international Greek-Latin terms, abbreviations and clichés in professional oral and written communication.

7. Ability to act socially responsibly and consciously.

Special (professional, subject) competencies:

1. Patient interview skills.

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

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

4. Ability to determine the necessary mode of work and rest during the treatment of diseases

5. Ability to determine the nature of nutrition in the treatment of diseases.

6. Ability to determine the principles and essence of disease treatment.

7. Ability to diagnose emergency conditions.

8. Ability to determine the tactics of providing emergency medical care.

9. Skills in providing emergency medical care

10. Skills in performing medical manipulations.

11. Ability to determine the tactics of physiological pregnancy, physiological childbirth and the postpartum period. Counseling skills on family planning and selection of a contraceptive method.

12. Ability to carry out sanitary and hygienic and preventive measures.

13. Ability to plan and carry out preventive and anti-epidemic measures for infectious diseases.

14. Ability to determine the management tactics of persons subject to dispensary supervision.

15. Ability to conduct an examination of work capacity.

16. Ability to keep medical documentation.

Program learning outcomes, the formation of which is facilitated by the study of the discipline " Endoscopic technologies in otorhinolaryngology".

1. To know the structure and functions of individual organs and systems and the human body as a whole in normal conditions, during the development of pathological processes, diseases; to be able to use the acquired knowledge in further education and practical activities of a doctor.

2. To collect data on the patient's complaints, life history (in particular, professional anamnesis) in the conditions of a health care facility and/or at the patient's home according to a standard survey scheme.

3. To prescribe and analyze additional (mandatory and additional) examination methods (laboratory, X-ray, functional and/or instrumental). To evaluate information for the purpose of differential diagnosis of diseases, using knowledge about a person, his organs and systems based on the results of laboratory and instrumental studies (according to list 4).

4. To establish a preliminary and clinical diagnosis of the disease (according to list 2) on the basis of leading clinical symptoms or syndromes (according to list 1) by making a reasoned decision and logical analysis, using the most likely or syndrome diagnosis, data from laboratory and instrumental examination of the patient, conclusions differential diagnosis, knowledge about a person, his organs and systems, observing the relevant ethical and legal norms.

5. To determine the necessary regime of work and rest during the treatment of the disease (according to list 2) in the conditions of a health care facility, at the patient's home and at the stages of medical evacuation, including in the field conditions, on the basis of a previous clinical diagnosis, using knowledge about a person, his organs and systems, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.

6. To prescribe the necessary medical nutrition during the treatment of the disease (according to list 2), in the conditions of a health care facility, at the patient's home and at the stages of medical evacuation, including in the field conditions based on a preliminary clinical diagnosis, using knowledge about a person, his organs and systems, observing relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.

7. To determine the nature of treatment of the disease (conservative, operative) and its principles (according to list 2) in the conditions of a health care facility, at the patient's home and at the stages of medical evacuation, including in field conditions on the basis of a preliminary clinical diagnosis, using knowledge about a person, his organs and systems, observing relevant ethical and legal norms, by making a reasonable decision according to existing algorithms and standard schemes.

8. To diagnose urgent conditions and establish a diagnosis (according to list 3) by making a reasoned decision and assessing a person's condition under any

circumstances (at home, on the street, in a medical and preventive institution), including in emergency situations, in field conditions, in conditions of lack of information and limited time, using standard methods of physical examination and possible anamnesis, knowledge about a person, his organs and systems, observing relevant ethical and legal norms.

9. To determine the tactics of providing emergency medical care, under any circumstances, using knowledge about a person, his organs and systems, observing the relevant ethical and legal norms, by making a reasoned decision, based on the established diagnosis (according to list 3) in conditions of limited time using standard schemes.

10. To provide emergency medical care under any circumstances, using knowledge about a person, his organs and systems, observing relevant ethical and legal norms, making a reasoned decision based on the diagnosis of an emergency (according to list 3) in conditions of limited time according to certain tactics, using standard schemes.

11. To carry out medical manipulations (according to list 5) in the conditions of a health care institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition, using knowledge about a person, his organs and systems, complying with relevant ethical and legal norms, by making an informed decision and using standard methods.

12. To assess the general condition of the pregnant woman, the woman in labor, and the woman after giving birth in the conditions of the health care institution based on anamnesis data, general examination, bimanual, external and internal obstetric examination. To determine the tactics of physiological management of pregnancy, physiological childbirth and the postpartum period. To conduct consultations on issues of family planning and the choice of a contraceptive method based on anamnesis data, a general examination and a gynecological examination of a woman, using knowledge about the reproductive organs of a woman, observing the relevant ethical and legal norms.

13. To implement a system of anti-epidemic and preventive measures, including measures of primary prevention in the conditions of the health care institution and beyond, based on data on the state of health of the population served, on the presence of the influence of the external environment on it, determinants of health , using existing methods within the framework of primary health care for the population. To organize secondary and tertiary prevention measures among the fixed contingent of the population using a generalized procedure for assessing the state of human health (screening, preventive medical examination, seeking medical help).

14. To plan and carry out preventive and anti-epidemic measures to prevent the spread of infectious diseases (according to list 2) in the conditions of a health

care facility based on the results of an epidemiological survey of outbreaks of infectious diseases, epidemiological analysis and the use of existing preventive measures and anti-epidemic methods. Identify risk groups, risk areas, time of risk, risk factors and carry out an epidemiological analysis of infectious diseases of the population in the conditions of a health care institution, using statistical and laboratory methods. To diagnose infectious diseases in the early stages (according to list 2), carry out primary anti-epidemic measures in the center of the infectious disease.

15. To determine the management tactics of persons who are subject to dispensary supervision in a health care facility or at the patient's home, based on the received data on the patient's health status according to standard schemes, using knowledge about the person, his organs and systems. , observing the relevant ethical and legal norms, by making a reasoned decision.

16. To carry out an examination of working capacity by determining the presence and degree of restrictions on vital activities, the type, degree and duration of incapacity with the preparation of relevant documents in the conditions of a health care institution based on data on the disease and its course, peculiarities of a person's professional activity.

17. To keep medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents, using standard technology. To prepare reports on personal production activity using official accounting documents in a standard form.

18. To comply with the requirements of ethics, bioethics and deontology in professional activities.

Learning outcomes of the academic discipline:

after completing the study of the academic discipline "Endoscopic technologies in otorhinolaryngology", students must

Know:

- topographical and clinical anatomy of the upper respiratory tract and ear in the age aspect;
- physiology of ENT organs; mutual connection of functional systems of the body and the level of their regulation;
- clinical and functional research methods in otorhinolaryngology;
- etiological factors and main pathogenetic mechanisms of pathological processes of the upper respiratory tract and ear;
- clinical picture, methods of endoscopic diagnosis and treatment of the main diseases of the nose and paranasal sinuses, external, middle and internal ear, pharynx, larynx using endoscopic technologies;

- principles of providing emergency care for urgent ENT pathology;

- principles of preparing patients for surgery using endoscopic technologies and management in the postoperative period;

- means and methods of analgesia during otorhinolaryngological operations;

- operating room equipment, surgical instruments used in various operations on ENT organs, and endoscopic equipment;

- the requirements of ethics, bioethics and deontology in their professional activity.

Be able to:

- carry out preparation for work and adjustment of endoscopic equipment;

- collect and evaluate anamnesis data;

- carry out an endoscopic examination of an otorhinolaryngological patient (anterior and posterior rhinoscopy, oropharyngoscopy, indirect laryngoscopy, otoscopy) and assess the condition of the patient;

- draw up a patient examination plan;

- interpret the data of additional (laboratory and instrumental) research methods;

- carry out differential diagnosis of the most common diseases of the upper respiratory tract and ear;

- establish a preliminary and clinical diagnosis;

- draw up algorithms and schemes of conservative and surgical management of a patient with otorhinolaryngological pathology using endoscopic technologies;

- perform endoscopic diagnostic and therapeutic manipulations;

- to provide emergency medical assistance in case of emergency;

- carry out rehabilitation of patients after endoscopic interventions;

- keep medical documentation;

- to comply with the requirements of ethics, bioethics and deontology in their professional activities.

Lectures are not provided by the program.

Seminars are not provided by the program

Thematic plan of practical classes by modules and content modules, specifying the basic issues, which are considered at the practical classes

Seq. No.	**TITLE OF THE TOPIC**	Number of hours
1	2	3

1.	**Endoscopic research methods in otorhinolaryngology.** - Implementation of endoscopic technologies in medical practice in a historical aspect. - Main areas of application of endoscopic technologies. - Rigid and fiber-optic endoscopes, their scope of application. - External examination of ENT organs, sequence and technique of conducting ENT endoscopic examinations. - Equipment and ergonomics for carrying out ENT endoscopic examination in the conditions of an endoscopy office. - Peculiarities of endoscopy in children. - Carrying out surgical interventions using endoscopic technologies.	2
2.	**Anatomy and physiology of the nose and paranasal sinuses from the standpoint of endoscopic diagnostics and surgery** - Clinical anatomy of the nasal cavity. - Features of the structure of the mucous membrane of the respiratory and olfactory zones of the nasal cavity. - Ostiomeatal complex, its components. - Olfactory analyzer, conductive paths. - Clinical anatomy of paranasal sinuses, their topography. - Physiology of the nose and paranasal sinuses.	2
3.	**Methods of researching the nose and paranasal sinuses** - Rhinoscopy: front, middle and back - Endoscopic examination of the nasal cavity. - Study of the area of the ostiomeatal complex - Olfactometry - Rhinomanometry - Computer and magnetic resonance tomography magnetic imaging of the nose and paranasal sinuses. Their role in sinusotomy planning.	4
4.	**Anatomical and physiological features of different parts of the pharynx and larynx, methods of their examination.** - Topography of the pharynx, larynx. Age and gender characteristics. - Skeletotopy, syntopy and holotopy of the larynx.	2

	- The structure and functions of the lymphadenoid pharyngeal ring. - Pharynx physiology. - Clinical anatomy of the larynx. Functional characteristics of the muscles of the larynx. - Physiology of the larynx. - Direct and indirect laryngoscopy. Microlaryngoscopy. - Resistance-suspension laryngoscopy.	
5.	**Clinical anatomy, physiology of auditory and vestibular analyzers.** - Anatomical and topographic features of the external auditory canal. - Features of the skin of the external auditory canal. - Anatomical structures of the middle ear. - Anatomical and physiological features of the auditory tube in the age aspect. - Types of mastoid structure, options for pneumatization and their importance for the development of pathological processes. - The structure of the structures of the inner ear.	2
6.	**Methods of hearing analyzer research.** - Methods of studying the structures of the middle ear. - Mechanism of sound conduction and sound perception. - Otomicroscopy. Interpretation of the otoscopic picture. - Examination of hearing with speech. - Audiometry and impedance measurement. Characteristics of the main types of audiometric curves. - Endoscopic examination of the state of the pharyngeal opening of the auditory tube.	2
7.	**Diseases of the nasal cavity. Curation of patients.** - Nasal septum deviation - Chronic rhinitis. Classification. - Clinic, diagnosis and treatment of chronic catarrhal, atrophic and hypertrophic rhinitis. - Vasomotor rhinitis. - Allergic rhinitis: clinical picture, diagnosis, principles of treatment. - Conservative and surgical treatment of vasomotor rhinitis. - Medical history: structure, management.	2

8.	**Acute and chronic diseases of the nose and paranasal sinuses.** - Acute rhinosinusitis. Classification. - Diagnosis, principles of treatment of acute forms of rhinosinusitis. - Features of the course of odontogenic maxillary sinusitis; implantitis - Principles of functional endoscopic surgery (FESS) in acute sinusitis. - Classification, diagnosis, chronic inflammation of paranasal sinuses of various localization. - Tactics of providing assistance with osteomas of the paranasal sinuses. - Features of the course of polypous forms of sinusitis. - Principles of functional endoscopic surgery (FESS) in chronic sinusitis.	4
9.	**Rhinogenic orbital and intracranial complications.** - Ways of penetration of the infection from the paranasal sinuses into the cavity of the skull and orbit. - Clinical symptoms in orbital and intracranial complications - Diagnostic methods for suspected orbital and intracranial complications. - Basic methods of providing assistance to patients with rhinogenic orbital and intracranial complications. - Principles of functional endoscopic surgery (FESS) in chronic sinusitis.	2
10.	**Chronic tonsillitis, hypertrophy of palatine and pharyngeal tonsils.** - Classification of chronic tonsillitis. - Clinical symptoms, diagnostic criteria of chronic tonsillitis. - Principles of treatment of chronic tonsillitis. - Hypertrophy of palatine tonsils: etiology, clinical picture, treatment, indications for surgery. - Hypertrophy of the pharyngeal tonsil: clinical picture, treatment, indications for surgery. - surgical interventions for pharyngeal tonsil hypertrophy.	2

11.	**Diseases of the larynx. Stenosis of the respiratory tract.** - Acute laryngitis. Main clinical manifestations. Endoscopic picture. Principles of treatment. - Chronic laryngitis. Classification. - Stenosis of the respiratory tract. - Stages of the clinical course of laryngeal stenosis. - Basic principles of providing care for airway stenoses. - Indications for tracheostomy and conicotomy. - Endoscopic examination of the respiratory tract after tracheostomy.	2
12.	**Certain diseases of the ear.** - Diseases of the external ear. Otomycosis. - Acute purulent otitis media. Mastoiditis - Chronic otitis media. Classification. - Principles of treatment of chronic forms of purulent otitis media. - Acute and chronic catarrh of the middle ear.	2
13.	**Medical history examination. Credit.**	2
	Total	**30**

INDEPENDENT WORK

No	TITLE OF THE TOPIC	Number of hours
1.	Preparation for practical classes – theoretical preparation and working out of practical skills.	14
2.	Preparation for current control measures	12
3.	Preparation for writing of medical history.	12
4.	Preparation for examination of medical history	5
5.	**Studying the topics that are not included in the classroom plan (list):** **Otosclerosis.** - Clinical picture. - Modern diagnostic methods. - Methods of treatment. **Acute and chronic salpingitis.**	 6 6

	- Clinical symptoms, diagnosis. - Diagnostic methods. - Shunting of the tympanic membrane. **Perforations of nasal septum.** - Etiological factors (abscess of nasal resection, trauma, atrophic process, iatrogeny). - Clinical manifestations. - Methods of treatment. - Peculiarities of management of the postoperative period.	5
Total		**60**

Individual tasks are not provided by the program

The list of questions that students of higher education must learn when studying the discipline (form of control - credit)

Content module 1. Propedeutics of otorhinolaryngology.

1. Equipment and ergonomics during endoscopic examination of a patient in the examination room.
2. Peculiarities of endoscopic examination of children.
3. The role of the ostiomeatal complex in regulating ventilation and drainage around the sinuses.
4. Vasoconstriction during endoscopy of the nasal cavity and FESS.
5. Necessary components for planning endoscopic rhinosurgical intervention.
6. Principles of placement of the endoscope and auxiliary instruments during FESS.
7. Use of a shaver during functional sinusotomy.
8. The role of rhinomanometry in planning care for patients with nasal breathing difficulties.
9. Microlaryngoscopy technique.
10. Application of suspension laryngoscopy.
11. Methodology for endoscopic examination of the pharyngeal opening of the auditory tube.
12. Endoscopic characteristics of nasal septum deviations.
13. Endoscopic picture characteristic of odontogenic maxillary sinusitis.
14. Features of providing care for odontogenic maxillary sinusitis.
15. Features of the clinical course of implantitis.
16. Shaver and coblation adentomy: advantages and disadvantages.

17. Techniques for conducting endoscopy of the respiratory tract through the tracheostomy opening.

18. The role of microotoscopy in the diagnosis of otomycosis.

19. The role of endoscopy in the diagnosis and treatment of catarrh of the middle ear.

20. The main causes of orbital sinusogenic complications.

21. Endoscopic orbitotomy for orbital phlegmon and retrobulbar abscess.

22. Endoscopic approaches for removing osteomas of the paranasal sinuses.

23. Anesthetic support during FESS.

24. Possible complications during endoscopic examination and methods of their prevention.

25. Radiation diagnostics in endoscopic rhinosurgery.

26. Features of endoscopic maxillotomy in odontogenic maxillitis.

27. Methods of stopping bleeding during FESS.

1

Teaching methods

verbal (lecture, explanation, story, conversation, instruction);

visual (observation, illustration, demonstration);

practical (performance of graphic works, carrying out of experiment, practice);

thematic discussions;

case method;

simulation games;

research methods;

presentations;

problematic presentation of the material.

The form of final control of academic performance is FMC

Assessment forms and methods:

The main methods of monitoring the knowledge of applicants for higher education are: observation of educational activities of applicants for higher education, oral survey, written control, test control, practical check, as well as methods of self-control and self-evaluation.

Input control at the beginning of studying a discipline is carried out in the form of solving test tasks to assess the initial level of knowledge of applicants for higher education.

The current control is carried out during the study of a certain topic to determine the quality of assimilation of a certain volume of educational material, the level of formation of a separate skill or ability through an oral survey, solving

situational tasks, written control of knowledge and skills with the help of written works (written answers to questions, solving situational tasks with justification) test control using a set of standardized tasks (open and closed form tests), programmed control using computer programs for testing, practical testing, self-control.

The final control of the knowledge and skills acquired by the student is carried out after the completion of the study of the program material in the discipline by oral answers to the questions of the FMC examination ticket.

System of current and final control

Control measures for evaluating the educational activity of applicants for higher education include current and final control of knowledge, abilities and skills of higher education students.

Input control is carried out at the beginning of the study of an academic discipline in order to diagnose the entrance level of knowledge of applicants for higher education and determining the possibility of perception, as well as their readiness to master this educational discipline. According to the results of entrance control, individual work with higher education applicants is organized.

Current control is carried out by teacher during practical classes. The main purpose of current control is to provide feedback between teacher and of applicants for higher education in the process of learning and formation of educational motivation of applicants for higher education. Current control is carried out by academic staff during practical classes. The teacher must assess the success of each applicant for higher education in each class on a four-point (traditional) scale, taking into account standardized, generalized criteria for assessing the knowledge of higher education (Table 1).

Assessment of success is integrated (all types of work of the applicant are evaluated, both in preparation for the lesson and during the lesson) according to the criteria that are communicated to the applicants for higher education at the beginning of the discipline. With the beginning of the teaching of the discipline, the teacher informs the applicants for higher education of the requirements for current control of knowledge.

The grade is issued by the teacher in the «Journal of student attendance and success» and synchronously in the «Electronic Journal of PSMU"» (hereinafter EJ) at the end of the class or after checking individual control tasks (written works, solving typical ones or situational tasks and test tasks), but not later than 2 calendar days after the class (in accordance with the «Regulations on the electronic journal of success»).

Table 1

Standardized generalized criteria for assessing the knowledge of higher education higher education seekers

On a 4-point scale	Assessment in ECTS	Evaluation criteria
5 (excellent)	A	An applicant for higher education shows special creative abilities, is able to acquire knowledge independently, without the help of the teacher finds and processes the necessary information, is able to use the acquired knowledge and skills for decision-making in unusual situations, convincingly argues answers, independently reveals own talents and inclinations, possesses not less than 90 % of knowledge on the topic both during the survey and all types of control.
4 (good)	B	An applicant for higher education is fluent in the studied amount of material, applies it in practice, freely solves exercises and tasks in standardized situations, independently corrects errors, the number of which is insignificant, has at least 85% knowledge of the topic as during the survey, and all types of control .
	C	An applicant for higher education is able to compare, summarize, systematize information under the guidance of a researcher, in general, independently apply it in practice, to control his own activities; to correct mistakes, among which there are significant ones, to choose arguments to confirm opinions, has at least 75% of knowledge on the topic both during the survey and all types of control.
3 (satisfactory)	D	An applicant for higher education reproduces a significant part of the theoretical material, shows knowledge and understanding of the basic provisions with the help of research and teaching staff, can analyze educational material, corrects errors, among which there is a meaningful

		number of significant, has at least 65% knowledge of the topic, and all types of control.
	E	An applicant for higher education has the educational material at a level higher than the initial, a significant part of it reproduces at the reproductive level, has at least 60% knowledge of the topic both during the survey and all types of control.
2 (unsatisfactory)	FX	An applicant for higher education has the material at the level of individual fragments that make up a small part of the material, has less than 60% knowledge of the topic both during the survey and all types of control.
	F	An applicant for higher education has the material at the level of elementary recognition and reproduction of individual facts, elements, has less than 60% knowledge of the topic as during the survey, and all types of control.

Students of higher education who have obtained the required minimum number of points during the current control (average success score of 3.0 and above), do not have missed lectures, seminars, and practical classes, and have fulfilled all the requirements for each academic discipline, which are provided for by the working curriculum, receive credit discipline program (medical history protection, etc.).

The learning result is evaluated on a multi-point scale and is passed/failed. The maximum number of points that can be obtained by a student of education in the discipline is 200. The minimum number of points that must be obtained by a student of higher education is 122. The average grade for the current activity is converted into points on a 200-point scale, according to the unified table:

Table 2

Unified table of correspondence of scores for current academic progress, scores for FMC, exam, and traditional four-point score

Average score for current academic progress (A)	Points for current academic progress of the module (A * 24)	Points for FMC of a module (A * 16)	Points for a module and / or exam (A * 24 + A * 16)	Category of ECTS	By 4-point scale

2	48	32	80	**F** **FX**	2 Inadequate
2.1	50	34	84		
2.15	52	34	86		
2.2	53	35	88		
2.25	54	36	90		
2.3	55	37	92		
2.35	56	38	94		
2.4	58	38	96		
2.45	59	39	98		
2.5	60	40	100		
2.55	61	41	102		
2.6	62	42	104		
2.65	64	42	106		
2.7	65	43	108		
2.75	66	44	110		
2.8	67	45	112		
2.85	68	46	114		
2.9	70	46	116		
2.95	71	47	118		
3	72	50	122	**E**	3 Marginal
3.05	73	50	123		
3.1	74	50	124		
3.15	76	50	126		
3.2	77	51	128		
3.25	78	52	130	**D**	
3.3	79	53	132		
3.35	80	54	134		
3.4	82	54	136		
3.45	83	55	138		
3.5	84	56	140	**C**	4 Adequate and Good
3.55	85	57	142		
3.6	86	58	144		
3.65	88	58	146		
3.7	89	59	148		
3.75	90	60	150		
3.8	91	61	152		
3.85	92	62	154		

3.9	94	62	156		
3.95	95	63	158		
4	96	64	160		
4.05	97	65	162	**B**	
4.1	98	66	164		
4.15	100	66	166		
4.2	101	67	168		
4.25	102	68	170		
4.3	103	69	172		
4.35	104	70	174		
4.4	106	70	176		
4.45	107	71	178		
4.5	108	72	180	**A**	5 Excellent
4.55	109	73	182		
4.6	110	74	184		
4.65	112	74	186		
4.7	113	75	188		
4.75	114	76	190		
4.8	115	77	192		
4.85	116	78	194		
4.9	118	78	196		
4.95	119	79	198		
5	120	80	200		

Methodological support:

1. Recommended literature
2. Multimedia presentations of lectures.
3. Multimedia presentations for independent study of topics that are not part of the classroom lessons plan.
4. Syllabus.
5. Materials for monitoring the knowledge, abilities and skills of education seekers (tests of various levels of complexity, situational tasks, computer control programs).

Recommended literature
Basic (available at the library of PSMU)

1. Otorhinolaryngology: textbook/ Yu. Mitin, Yu Deyeva, Ya. Yu. Gomza et al. – 6 th edition. – Медицина, 2020. – 264 с.
2. Juravlev N. et al. Selected Lectures in Otorhinolaryngology (for students of higher medical education of IV level of acceleration, who masters the discipline in English). – Kharkiv. – 2007. – 108 p.
3. Lee's K. J. Essential Otolaryngology: Head and Neck Surgery / eds.: Y. Chan, J. Goddard. – 12th ed. – New York [etc.]: mcgraw-Hill, 2019. – XXVIII, 1313 p.

Supplementary

1. Пропедевтика ендомікроринохірургії / Безшапочний С.Б., Гасюк Ю.А., Лобурець В.В. – К., ТОВ «Вістка», 2018. - 106 с.
2. Косаковський А., Юрочко Ф., Копанська Д. «Комп'ютерна томографія носа та приносових пазух. Практика оториноларинголога: Львів.: Видавництво «МС», 2019. – 72 с.
3. «Грибкові ураження вуха» / Безшапочний С.Б., Гасюк Ю.А., Зачепило С.В. – Полтава, ТОВ «АСМІ», 2019. – 98 с.
4. Лайко А. А. Роль патології слухової труби у розвитку захворювань середнього вуха / А. А. Лайко, Ю. В. Гавриленко, О. М. Борисенко, В. В. Березнюк // —Вінниця «Твори», 2020— 169 с.
5. Дитяча ринологія. Навч.-метод. посібник / під ред. Ф. Юрочка, А. Косаковського, В. Шкорботуна. — Львів: Мс, 2020. — 288 с., іл.
6. Browning G.G., Rovers M.M., Williamson I. et al. Grommets (ventilation tubes) for hearing loss associated with otitis media with effusion in children // Cochrane Database Syst. Rev. - 2010. - 6. - 10: CD001801.
7. Dhingra Pl., Dhingra Shruti (eds.) Diseases of Ear, Nose and Throat & Head and Neck Surgery / 7th edition. - Elsevier, 2018.- 556 p.- ISBN: 978-81-312-4884-3
8. Sanna M. et al. Color Atlas of Endo-Otoscopy: Examination-Diagnosis-Treatment / Thieme, 2017.- 348 p.- ISBN 978-3-13-241523-2.
9. Ludman Harold S., Bradley Patrick J. (eds.) ABC of Ear, Nose and Throat / 6th edition. - BMJ Books, 2013.- 170 p.- (ABC Series)- ISBN 978-0-470-67135-1

Information resources

Ministry of Education and Science of Ukraine http://www.mon.gov.ua/
National Library of Medicine https://www.nlm.nih.gov/
The electronic site of the National Library of Ukraine named after V.I. Vernadskyi http://www.nbuv.gov.ua/

National Scientific Medical Library of Ukraine https://library.gov.ua/
National Center for Biotechnology Information https://www.ncbi.nlm.nih.gov
World Health Organization http://www.who.int/en/
http://www.lorlife.kiev.ua/archive.shtml
Educational portal of NMU n.a. O. O. Bohomoltsia.

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