Ministry of Science and Higher Education of the Russian Federation
Federal State Autonomous Institution of Higher Education
“National Research Nuclear University “MEPhI”

INSTITUTE OF ENGINEERING PHYSICS FOR BIOMEDICINE

APPROVED НТС ИФИБ

Protocol No. 3.1

dated 30.08.2024

ACADEMIC COURSE OUTLINE

ОТОРИНОЛАРИНГОЛОГИЯ / OTORHINOLARYNGOLOGY

Educational program track (speciality) [1] 31.05.01 General Medicine

Semester	**Labour input, credits**	**Total course academic, hours**	**Lectures, hrs.**	**Practical sessions, hrs.**	**Laboratory sessions, hrs.**	**In the form of practical studies, hrs.**	**Independent studies, hrs.**	**Independent studies monitoring, hrs.**	**Course progress, Exam/Pass-fail exam/Term**
10	3	108	16	40	0		52	0	PFE
Total	3	108	16	40	0	40	52	0	

ABSTRACT

The course programme is based on the requirements for the results of the speciality programme. Graduates (medical doctors) must be prepared to perform tasks related to the diagnosis, treatment and prevention of diseases. In the course of studying the discipline, students acquire knowledge, skills and abilities in the diagnosis of the most common diseases of the ear, nose and throat, in the management of patients with otorhinolaryngological diseases, and in the selection of the optimal method of treatment and prevention of diseases. Continuous acquisition of knowledge and professional practical skills is provided through practical training in real hospital and outpatient clinic settings.

1. ACADEMIC COURSE GOALS AND OBJECTIVES

1. GOALS AND OBJECTIVES OF THE COURSE

The goal of the course is to develop competencies in the diagnosis, treatment, and prevention of the most common diseases of the ENT system and related structures.

Objectives

- to develop a framework of knowledge about the etiology, epidemiology, pathogenesis, clinical manifestations of otorhinolaryngological diseases, methods of diagnosis, treatment, and prevention of the most common diseases of the ENT organs;
- develop the ability to identify the main pathological conditions, symptoms, and syndromes, nosological forms of diseases of the ENT organs, and formulate a preliminary diagnosis;
- develop the skills and abilities to draw up a plan for the examination and treatment of patients with otorhinolaryngological pathology, interpret the results of additional studies according with clinical recommendations in order to make a diagnosis.
- development of skills and abilities to provide medical care in emergency situations in otorhinolaryngology, identifying indications for hospitalization of patients;
- development of skills and abilities to choose effective treatment method for ENT diseases, taking into account the severity of the disease and in accordance with clinical recommendations; developing the ability to evaluate the effectiveness and safety of prescribed treatment;
- developing the skills and abilities to carry out preventive measures intended to prevent the development of ear, throat, nose, and related structure diseases, complications, and recurrence, as well as rehabilitation measures and the popularization of a healthy lifestyle;
- development of communication skills with patients, taking into account ethics and deontology, and skills for interacting with colleagues;
- development of clinical thinking, the ability to work with scientific literature and apply the normative documents in professional activities, and the ability to carry out medical documentation.

2. PLACE OF THE ACADEMIC COURSE IN THE MAIN HIGHER EDUCATION CURRICULUM

The discipline is preceded by the study of pathological anatomy and physiology, internal diseases (faculty and hospital course), surgical diseases (faculty and hospital course), radiation diagnostics, other clinical disciplines and practices.

The knowledge, skills, abilities, and practical experience acquired in this discipline are necessary for successful professional activity.

3. DEVELOPED COMPETENCIES AND INTENDED LEARNING OUTCOMES

Universal and/or general professional competencies:

Competency code and title	**Code and title of competency-based rubrics**
ОПК-4 [1] – Capable of using medical devices stipulated by the medical care procedures, as well as conducting patient examination for diagnosis establishment.	З-ОПК-4 [1] – Know: - modern diagnostic instrumental examination methods for patients, including functional, radiological, ultrasound, radionuclide diagnostics, and endoscopy; - diagnostic capabilities of instrumental examination methods; - medical devices stipulated by the procedure for providing medical care to the adult population in the "Therapy" specialty, and the equipment standard for a therapeutic room; - main medical devices stipulated by the procedures for providing medical care to the adult population in major surgical specialties, obstetrics, and gynecology; - indications for referring patients for instrumental examinations and functional diagnostics; - techniques for physical examination of patients using medical devices stipulated by procedures and considering medical care standards У-ОПК-4 [1] – Be able to: - use medical devices stipulated by the medical care procedure; - determine the required volume and content of instrumental and functional diagnostics to establish a diagnosis; - interpret results of the most common functional and instrumental diagnostic methods В-ОПК-4 [1] – Possess skills in: - using basic medical devices (stethoscope, blood pressure monitor, sphygmomanometer, pulse oximeter, height-weight scale, measuring tape, neurological hammer, scalpel, forceps, and other devices); - operating electrocardiographs and devices for measuring external respiratory function; - interpreting results of the most common functional and instrumental diagnostic methods
ОПК-6 [1] – Capable of organizing general nursing, providing primary medical care, ensuring the organization of work and making professional decisions in emergencies at the pre-hospital stage, in emergency situations, epidemics and in areas of mass destruction	З-ОПК-6 [1] – Know: - a set of measures for general nursing with diseases of various organs and systems; Signs of clinical and biological death; - indications for patient hospitalization for the most common diseases with typical progression. У-ОПК-6 [1] – Be able to: - organize care for patient when providing medical care in an outpatient setting; - determine the need for patient hospitalization; - ensure the organization of work in emergency situations, epidemics, and in mass casualty zones. В-ОПК-6 [1] – Possess skills in: - general care of a patient (general nursing); - providing first aid; - making medical decisions in emergencies at the prehospital stage, including in emergency situations, epidemics, and in mass casualty zones.
ОПК-7 [1] – Capable of prescribing treatment and monitoring its effectiveness and safety.	З-ОПК-7 [1] – Know: - pharmacological groups of medicinal drugs and their intended purposes; - mechanisms of action of pharmacological and non-pharmacological treatments, indications and contraindications for their use, side effects, and complications caused by their application; - methods for

	monitoring the effectiveness and safety of various treatment approaches. У-ОПК-7 [1] – Be able to: - make rational choices for pharmacological and non-pharmacological treatments based on clinical guidelines and in accordance with medical care standards; - develop a treatment plan for a disease or condition considering the diagnosis, age, disease course characteristics, and comorbidities, based on clinical guidelines and medical care standards; - prescribe medications, medical devices, and therapeutic nutrition considering the diagnosis, age, disease course characteristics, and comorbidities, based on clinical guidelines and medical care standards; - justify prescribed pharmacological and non-pharmacological treatments; - evaluate the effectiveness and safety of medications, medical devices, therapeutic nutrition, and other treatment methods. В-ОПК-7 [1] – Possess skills in: - administering medications through various routes of administration; - developing treatment plans for diseases or conditions considering diagnosis, age, disease course characteristics, and comorbidities; - assessing the effectiveness and safety of prescribed treatments.

Professional competencies in compliance with the goals and professional knowledge areas:

Professional activity goal	**Professional activity knowledge area**	**Professional competency code and title; Based on the professional standard, experience analysis**	**Code and title of competency-based rubrics**
medical			
Diagnostics of diseases and pathological conditions of the patients.	Individuals (patients); the population; the set of means and technologies aimed at creating conditions for preserving and strengthening the health of the adult population	ПК-3.2 [1] - Capable of conducting patient examinations to establish a diagnosis *The base:* Professional standard: 02.009	З-ПК-3.2[1] - Know: - clinical diagnosis establishment algorithm; - patient history-taking and physical examination methodology; - laboratory and instrumental research methods for health assessment to establish a diagnosis; - semiotics of diseases of different organs and systems; - structure, principles of the current International Statistical Classification of Diseases and Related Health Problems (hereinafter - ICD).; У-ПК-3.2[1] - Be able to: - conduct patient history-taking and physical

			examination; - interpret history, physical examination data, laboratory and instrumental results to recognize a condition or establish the presence/absence of a disease, establish a diagnosis; - distinguish and recognize in each specific case tissue damage, the reaction to it, and the form of adaptability; - develop a patient examination plan, justify the necessity and scope of laboratory and instrumental examination; - identify main pathological conditions, symptoms and syndromes, nosological forms in the patient according to the current ICD.; В-ПК-3.2[1] - Possess skills in: - patient history-taking and physical examination; Formulating a preliminary diagnosis; - developing a patient examination plan; Interpreting laboratory and instrumental results; - establishing a diagnosis considering the current ICD
Providing primary medical care in outpatient settings and day hospital settings.	Individuals (patients); the population; the set of means and technologies aimed at creating conditions for preserving and strengthening the health of the adult population	ПК-3.3 [1] - Able to provide primary medical care in an outpatient setting *The base:* Professional standard: 02.009	З-ПК-3.3[1] - Know: - general issues of organizing medical care for the population and organizing medical care for the adult population in outpatient settings, including at home; - features of medical care using telemedicine technologies; - Clinical picture, differential diagnosis, features of the course of the disease, complications and outcomes of internal diseases; - diagnostic

			criteria for the most common diseases of internal organs and systems; - indications for referring patients for specialist consultations according to clinical guidelines and considering relevant medical care standards; - indications for referring patients for specialized medical care in inpatient settings and day hospitals according to clinical guidelines and considering relevant medical care standards; - features of managing and treating elderly patients in outpatient settings. ; У-ПК-3.3[1] - Be able to: - perform differential diagnosis of internal diseases; - monitor the course of physiological pregnancy; - justify the need for referring patients to specialist consultations; - recognize the main and concomitant diseases; - assess disease or condition severity - the degree of organ and/or system damage or functional impairment due to the disease/condition or its complications; - determine management, examination and treatment tactics for patients with specific diseases (nosological units) depending on disease severity and condition, according to clinical guidelines and considering relevant medical care standards.; В-ПК-3.3[1] - Possess skills in: - conducting differential diagnosis with other diseases/conditions, including emergencies; -

			interpreting data obtained from patient consultations with specialists; - prescribing additional tests to clarify the diagnosis; - formulating a clinical diagnosis; - prescribing treatment according to clinical guidelines and considering relevant medical care standards.

4. PEDAGOGIC POTENTIAL OF THE COURSE

Pedagogic tracks/objectives	**Pedagogic goals (code)**
Professional education	Establishing conditions for: formation of responsibility for professional choice, professional development and professional decisions (B18)
Professional education	Establishing conditions for: formation of motivation to improve the quality of medical care to the population and the desire to follow the rules and norms of interaction between the doctor, colleagues and the patient, contributing to the creation of the most favorable environment for the patient's recovery (B34)

5. ACADEMIC COURSE STRUCTURE AND CONTENT

Academic course sections, their scope, terms of study and assessment:

No.	**Academic course section name**	**Weeks**	**Lectures/ Practical (seminars)/ Laboratory sessions, hrs.**	**Compulsory current assessment (form*, week)**	**Maximum grade per section****	**Section assessment (form*, week)**	**Competency-based rubrics**
	10 Semester						
1	The First Section	1-8	8/20/0	T-8 (25)	25	T-8	З-ОПК-4, У-ОПК-4, В-ОПК-4, З-ОПК-6, У-ОПК-6, В-ОПК-6, З-ОПК-7, У-ОПК-7, В-ОПК-7, З-ПК-3.2, У-ПК-3.2, В-ПК-3.2,

							З-ПК-3.3, У-ПК-3.3, В-ПК-3.3
2	The Second Section	9-15	8/20/0	Т-15 (25)	25	Т-15	З-ОПК-4, У-ОПК-4, В-ОПК-4, З-ОПК-6, У-ОПК-6, В-ОПК-6, З-ОПК-7, У-ОПК-7, В-ОПК-7, З-ПК-3.2, У-ПК-3.2, В-ПК-3.2, З-ПК-3.3, У-ПК-3.3, В-ПК-3.3
	Totals for 10 Semester		16/40/0		50		
	Assessment events for 10 Semester				50	PFE	З-ОПК-4, У-ОПК-4, В-ОПК-4, З-ОПК-6, У-ОПК-6, В-ОПК-6, З-ОПК-7, У-ОПК-7, В-ОПК-7, З-ПК-3.2, У-ПК-3.2, В-ПК-3.2, З-ПК-3.3, У-ПК-3.3, В-ПК-3.3

* – abbreviated name of assessment

** – 100 maximum points per semester including a pass/fail exam and (or) an exam

Abbreviated current assessment forms and section assessment

Abbreviation	**Full name**
T	Testing
PFE	Pass/fail examination

SYLLABUS

Weeks	**Topics / Content**	**Lect., hrs.**	**Pr./sem., hrs.**	**Lab., hrs.**
	10 Semester	16	40	0
1-8	**The First Section**	8	20	0
1 - 4	**Clinical anatomy, physiology, and methods of examination**	All		

	of ENT organs 1.1 The significance of the functional state of ENT organs in human social adaptation and the role of upper respiratory tract and hearing organ diseases in determining the level of outpatient and inpatient care utilization and the overall morbidity of the population. The importance of otorhinolaryngology in the practice of doctors of various specialties. 1.2. Anatomical and physiological features of the outer and middle ear and their significance in the pathogenesis of ear diseases. Structure of the inner ear. Mechanisms of sound conduction and sound perception. Methods of examining the outer and middle ear (otoscopy, tympanometry, radiography, functional methods of examining hearing and balance). Methods of examining the vestibular system.	4 Online 0	10 0	0 0
5 - 8	**Anatomy and physiology of ENT organs** 1.3. Anatomy and physiology of the nose and paranasal sinuses. Structure of the mucous membrane of the respiratory and olfactory zones. The nasal valve and its physiological significance. The effect of nasal breathing on the functioning of various organs and systems. The nasal cycle. Examination of nasal functions. Aesthetic function of the nose. 1.4. Anatomy and physiology of the pharynx. Sections of the pharynx. Waldeyer's pharyngeal ring, its morphological and functional features and physiological significance. Examination methods for the pharynx. 1.5. Anatomy and physiology of the larynx. Internal muscles of the larynx, their innervation. Functions of the larynx. Methods of examining the larynx.	All 4 Online 0	 10 0	 0 0
9-15	**The Second Section**	8	20	0
9 - 12	**Nasal and paranasal sinus diseases. Ear diseases. Larynx and pharynx diseases** 2.1. Nasal bone fractures: (classification, examination methods, symptoms, diagnosis, treatment tactics). Persistent deformation of the external nose. Deformation of the nasal septum: pathogenetic significance and correction. Nasal furuncle. Symptoms, examination methods, clinical presentation, complications, conservative and surgical treatment, prevention. Hematoma and abscess of the nasal septum: etiology, symptoms, course, local and general complications, treatment. Clinical forms of chronic rhinitis (etiology, pathogenesis, morphological features, rhinoscopic picture, diagnostic methods, treatment, and prevention). Allergic rhinitis. Nasal bleeding. Etiology, pathogenesis, patient examination, diagnosis. Methods for stopping nasal bleeding. General and local causes of rhinosinusitis. The osteomeatal complex and its role in the development of sinusitis. Modern methods of diagnosing rhinosinusitis (endoscopy of the nose and paranasal sinuses, CT and MRI). 2.2 Acute maxillary rhinosinusitis (etiology, pathogenesis, clinical forms (catarrhal and purulent), clinical presentation, diagnosis, modern treatment standards). Odontogenic maxillary	All 4 Online 0	 10 0	 0 0

	sinusitis (etiology, pathogenesis, clinical presentation, diagnosis, modern treatment standards). Acute frontal sinusitis (etiology, pathogenesis, clinical presentation, diagnosis, modern treatment standards). Acute ethmoiditis (etiology, pathogenesis, clinical presentation, diagnosis, modern treatment standards). Acute sphenoiditis (etiology, pathogenesis, clinical presentation, diagnosis, modern treatment standards). Chronic rhinosinusitis (etiology, pathogenesis, clinical presentation, diagnosis, modern standards of conservative and surgical treatment). Modern methods of treating rhinosinusitis. 2.3 Etiology, pathogenesis, diagnosis, and treatment of injuries and diseases of the outer and middle ear: cerumen impaction, foreign bodies, otorrhagia, chondroperichondritis of the auricle, symptoms, diagnosis, treatment. Possible causes, symptoms, diagnostic methods, complications, treatment. Transverse and longitudinal fractures of the temporal bone. Otitis externa: etiology, pathogenesis, classification, clinical presentation, treatment, prevention. Acute otitis media: etiology, pathogenesis, clinical presentation, classification, diagnosis, treatment, prevention. Acute mastoiditis: etiology, pathogenesis, clinical presentation, diagnosis, treatment, prevention. 2.4. Chronic suppurative otitis media: meso- and epitympanitis. Etiology, pathogenesis, clinical presentation, diagnosis, treatment, prevention. 2.5. Otosclerosis (pathogenesis, characteristics of medical history and complaints, audiological picture, clinical presentation, surgical treatment). Ménière's disease (etiology, pathogenesis, diagnosis, treatment). Acoustic neuroma (clinical manifestations, diagnosis, treatment)			
13 - 15	**Injuries, acute and chronic infectious and inflammatory diseases, benign and malignant tumors of the ENT organs** Injuries, acute and chronic infectious and inflammatory diseases, benign and malignant tumors of the ENT organs 2.6. Injuries and foreign bodies of the larynx - diagnosis, treatment, prevention. Acute laryngitis, acute subglottic laryngitis: etiology, classification, clinical presentation, diagnosis, complications, treatment. Epiglottitis, phlegmonous laryngitis, clinical presentation, diagnosis, treatment. Acute laryngeal stenosis, stages (etiology, pathogenesis, symptoms, diagnosis, treatment tactics at various stages, principles of drug treatment). Foreign bodies in the respiratory tract - clinical presentation, diagnosis, differential diagnosis, removal methods, emergency care, complications. Foreign bodies in the esophagus - clinical presentation, diagnosis, differential diagnosis, removal methods, complications. 2.7. Laryngeal intubation. Tracheotomy, tracheostomy, conicotomy. 2.8. Acute and chronic infectious and inflammatory diseases of the pharynx. Pharyngitis: etiology, clinical presentation, diagnosis, treatment. Tonsillitis, classification, etiology, treatment. Paratonsillar and retropharyngeal abscesses,	All 4 Online 0	10 0	0 0

	paratonsillitis: clinical presentation, diagnosis, treatment, differential diagnosis. Principles of prevention of tonsillitis, timely detection and isolation of patients with tonsillitis. Chronic tonsillitis and its complications. Principles of treatment and dispensary observation. Diseases associated with chronic tonsillitis (rheumatism, glomerulonephritis, nonspecific infectious polyarthritis, capillary toxicosis). Methods of conservative and surgical treatment. Chronic pharyngitis: clinical presentation, classification, diagnosis, treatment. Mycotic lesions of the pharynx. Changes in the pharynx in AIDS. 2.9. Benign and malignant tumors of the ENT organs. TNM classification.			

Abbreviated names of online options:

Abbreviation	**Full name**
EC	E-course
FtM	Full-text material
FtL	Full-text lectures
VM	Video materials
AM	Audio materials
Prs	Presentations
T	Tests
ERM	E-reference materials
IS	Interactive site

PRACTICAL SESSIONS TOPICS

Weeks	**Topics / Content**
	10 Semester
1 - 4	**Clinical anatomy, physiology, and methods of examination of ENT organs** 1.1 Methods of providing inpatient care. 1.2 Methods of examining the outer and middle ear (otoscopy, tympanometry, radiography, functional methods of examining hearing and balance). Methods of examining the vestibular system.
5 - 8	**Anatomy, physiology, and examination methods for ENT organs** Anatomy, physiology, and examination methods for ENT organs 1.3. Examination of nasal functions. 1.4. Examination methods for the pharynx. 1.5. Examination methods for the larynx.
9 - 13	**Diseases of the nasal cavity and paranasal sinuses. Diseases of the ear. Diseases of the larynx and pharynx** 2.1. Fractures of the nasal bones: examination methods, symptoms, diagnosis, treatment tactics. Nasal boil. Symptoms, examination methods, clinical presentation, complications, conservative and surgical treatment, prevention. Hematoma and abscess of the nasal septum: etiology, symptoms, course, local and general complications, treatment. Clinical forms of chronic rhinitis (etiology, pathogenesis, morphological features, rhinoscopic picture, diagnostic methods, treatment, and prevention). Allergic rhinitis. Nasal bleeding. Etiology, pathogenesis, examination of the patient, diagnosis. Methods of stopping nasal bleeding. Modern methods of diagnosis of rhinosinusitis (nasal endoscopy and ONP, computer and nuclear magnetic resonance imaging).

	2.2 Acute maxillary rhinosinusitis (etiology, pathogenesis, clinical forms (catarrhal and purulent), clinical presentation, diagnosis, modern treatment standards). Odontogenic maxillary sinusitis (etiology, pathogenesis, clinical presentation, diagnosis, modern treatment standards). Acute frontal sinusitis (etiology, pathogenesis, clinical presentation, diagnosis, modern treatment standards. Acute ethmoiditis (etiology, pathogenesis, clinical presentation, diagnosis, modern treatment standards). Acute sphenoiditis (etiology, pathogenesis, clinical presentation, diagnosis, modern treatment standards). Chronic rhinosinusitis (etiology, pathogenesis, clinical presentation, diagnosis, modern standards of conservative and surgical treatment). Modern methods of treating rhinosinusitis. 2.3 Etiology, pathogenesis, diagnosis, and treatment of injuries and diseases of the outer and middle ear: sulfur plug, foreign bodies, ot hematoma, chondroperichondritis of the auricle, symptoms, diagnosis, treatment. Possible causes, symptoms, diagnostic methods, complications, treatment. Transverse and longitudinal fractures of the temporal bone. Otitis externa: etiology, pathogenesis, classification, clinical presentation, treatment, prevention. Acute otitis media: etiology, pathogenesis, clinical presentation, classification, diagnosis, treatment, prevention. Acute mastoiditis: etiology, pathogenesis, clinical presentation, diagnosis, treatment, prevention. 2.4. Chronic suppurative otitis media: meso- and epitympanitis. Etiology, pathogenesis, clinical presentation, diagnosis, treatment, prevention. 2.5. Otosclerosis (pathogenesis, characteristics of medical history and complaints, audiological picture, clinical presentation, surgical treatment). Ménière's disease (etiology, pathogenesis, diagnosis, treatment). Acoustic neuroma (clinical manifestations, diagnosis, treatment).
13 - 16	**Injuries, acute and chronic infectious and inflammatory diseases, benign and malignant tumors of the ENT organs** Injuries, acute and chronic infectious and inflammatory diseases, benign and malignant tumors of the ENT organs 2.6. Injuries and foreign bodies of the larynx - diagnosis, treatment, prevention. Acute laryngitis, acute subglottic laryngitis: etiology, classification, clinical presentation, diagnosis, complications, treatment. Epiglottitis, phlegmonous laryngitis, clinical presentation, diagnosis, treatment. Acute laryngeal stenosis, stages (etiology, pathogenesis, symptoms, diagnosis, treatment tactics at various stages, principles of drug treatment). Foreign bodies in the respiratory tract - clinical presentation, diagnosis, differential diagnosis, removal methods, emergency care, complications. Foreign bodies in the esophagus - clinical presentation, diagnosis, differential diagnosis, removal methods, complications. 2.7. Laryngeal intubation. Tracheotomy, tracheostomy, conicotomy. 2.8. Acute and chronic infectious and inflammatory diseases of the pharynx. Pharyngitis: etiology, clinical presentation, diagnosis, treatment. Tonsillitis, classification, etiology, treatment. Paratonsillar and retropharyngeal abscesses, paratonsillitis: clinical presentation, diagnosis, treatment, differential diagnosis. Principles of tonsillitis prevention, timely detection and isolation of patients with tonsillitis. Chronic tonsillitis and its complications. Principles of treatment and dispensary observation. Diseases associated with chronic tonsillitis (rheumatism, glomerulonephritis, nonspecific infectious polyarthritis, capillary toxicosis). Methods of conservative and surgical treatment. Chronic pharyngitis: clinical presentation, classification, diagnosis, treatment. Mycotic lesions of the pharynx. Changes in the pharynx in AIDS. 2.9. Benign and malignant tumors of the ENT organs. TNM classification.

6. EDUCATIONAL TECHNOLOGIES

The teaching process is based on methods that incorporate the latest scientific and information technology advances in education. These methods are designed to improve the quality of training by developing students' creative abilities and independence. To achieve this goal, both traditional teaching methods (lectures, clinical practical classes) and interactive forms of seminars and clinical case studies are used:

- practical training sessions (clinical case studies, role-playing in the form of clinical case studies or patient care);
- interactive clinical analysis with patient demonstrations;
- involvement of students in scientific preclinical and clinical research, preparation of presentation materials, reports, essays, or abstracts.

7. ASSESSMENT TOOLKIT

The assessment toolkit ensures verification of the intended learning outcomes achievement (competency-based rubrics) using current, midterm and interim assessment of the course.

The link between developed competencies and their assessment is presented in the following table:

Competency	**Achievement rubrics**	**Assessment activity (Syl 1)**
ОПК-4	З-ОПК-4	PFE, T-8, T-15, T-8, T-15
	У-ОПК-4	PFE, T-8, T-15, T-8, T-15
	В-ОПК-4	PFE, T-8, T-15, T-8, T-15
ОПК-6	З-ОПК-6	PFE, T-8, T-15, T-8, T-15
	У-ОПК-6	PFE, T-8, T-15, T-8, T-15
	В-ОПК-6	PFE, T-8, T-15, T-8, T-15
ОПК-7	З-ОПК-7	PFE, T-8, T-15, T-8, T-15
	У-ОПК-7	PFE, T-8, T-15, T-8, T-15
	В-ОПК-7	PFE, T-8, T-15, T-8, T-15
ПК-3.2	З-ПК-3.2	PFE, T-8, T-15, T-8, T-15
	У-ПК-3.2	PFE, T-8, T-15, T-8, T-15
	В-ПК-3.2	PFE, T-8, T-15, T-8, T-15
ПК-3.3	З-ПК-3.3	PFE, T-8, T-15, T-8, T-15
	У-ПК-3.3	PFE, T-8, T-15, T-8, T-15
	В-ПК-3.3	PFE, T-8, T-15, T-8, T-15

Educational achievement rubrics scales

The scale of each assessment activity varies from 0 to the maximum established point, inclusive. The final assessment of the course is performed on a 100-point scale and represents the sum of the points earned by the student in the section assessments, framework of current and interim assessment.

Sections and interim assessments are considered passed when the student achieves a minimum score equal to 60% of the maximum. The final grade is assigned only upon passing all sections and the interim assessment.

The final grade is assigned in accordance with the following scale:

Total score	**Rating on a 4-point**	**Pass/fail examination**	**ECTS**

	scale		assessment
90-100	5 – *«excellent»*	*«pass»*	A
85-89	4 – «*good*»		B
75-84			C
70-74			D
65-69	3 – «*satisfactory*»		
60-64			E
below 60	2 – «*fail*»	*«fail»*	F

An “excellent” grade indicates a deep and solid mastery of the program material by a student who presents their answers consistently, clearly, and logically, is able to closely link theory with practice, and uses materials from monographic literature in their answers.

A “good” grade corresponds to a student’s solid knowledge of the material, who presents their answers competently and to the point, without any significant inaccuracies.

A “satisfactory” grade corresponds to the basic level of mastery of the material by the student, in which the main material has been mastered, but its details have not been assimilated, the answers contain inaccuracies, insufficiently correct wording and logical inconsistencies.

A grade “pass” corresponds to at least a basic level of mastery of the program material, in which the student possesses the necessary knowledge, skills, and abilities, and is able to apply theoretical principles to solve typical practical problems.

A grade “fail” is given to a student who lacks a significant understanding of the curriculum material, makes significant errors in their answers, or fails all required assignments. These students are generally unable to continue their studies without additional classes.

8. ACADEMIC COURSE EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT

CORE READING:

1. ЭИ Р17 Otorhinolaryngology : учебник, Kryukov A.I., Palchun V.T., Magomedov M.M., Москва: ГЭОТАР-Медиа, 2020

2. ЭИ П14 Оториноларингология : учебник, Крюков А.И., Магомедов М.М., Пальчун В.Т., Москва: ГЭОТАР-Медиа, 2024

FURTHER READING:

1. ЭИ Н52 Неотложные и угрожающие состояния в оториноларингологии. Иллюстрированное руководство для врачей : практическое руководство, Блоцкий А.А [и др.], Москва: ГЭОТАР-Медиа, 2024

2. ЭИ О-85 Оториноларингология: национальное руководство. Краткое издание : практическое руководство, , Москва: ГЭОТАР-Медиа, 2024

SOFTWARE:

No special softwares is required

LMS AND ONLINE RESOURCES

https://online.mephi.ru/

http://library.mephi.ru/

9. LOGISTICAL SUPPORT

1. Персональный компьютер: Процессор CPU Intel Core i7-8700 (3.2GHz/12MB/6 cores) Материнская плата Gig (Клиническая база)

2. Мышь, клавиатура (Клиническая база)

3. Проектор SMART P109 (Клиническая база)

4. Кушетка медицинская (Клиническая база)

5. Монитор (Клиническая база)

6. Набор медицинских камертонов KaWe (64-302)

7. Иное оснащение, предусмотренное порядками оказания медицинской помощи по соответствующему профилю (Клиническая база)

8. Отоскоп BETA 200 с F.O. освещением XHL и перезаряжаемой рукояткой BETA 4 NT (64-301)

10. EDUCATIONAL AND METHODOLOGICAL RECOMMENDATIONS FOR STUDENTS

Before starting to study the topic, you should familiarize yourself with the main points of the practical lesson plan and the list of recommended reading.

When preparing for the practical class, you should first refer to the lecture notes, sections of textbooks, and teaching aids to get a general idea of the place and significance of the topic in the course. Then work with additional literature and take notes on the recommended sources. In the process of studying the recommended material, it is necessary to understand the structure of the topic being studied, identify the main points, follow their logic, and thus delve into the essence of the problem being studied. It is necessary to take notes on the material being studied in the form of a summary, which, along with visual memory, also involves motor memory and allows you to accumulate an individual fund of reference materials for quick review of what you have read and for mobilizing the knowledge you have accumulated.

Clinical practical sessions

The most important stage of practical training is independent work by students to master practical skills: in simulated conditions, at the patient's bedside, in the functional diagnostics room, etc. Depending on the specific topic of the class, students independently (or under the supervision of a

teacher) interview patients, conduct clinical examinations, observe instrumental diagnostics, study the results of additional examinations, summarize the data, present it in the form of fragments of medical histories, and report the results to the teacher. Achievements are assessed individually for each student, the degree of development of practical skills and their theoretical foundations.

Clinical reviews of thematic patients are conducted for the entire group or through student participation in clinical reviews and periodic scientific and practical conferences at medical organizations where practical training takes place. During the reviews, the instructor evaluates each student's active participation and ability to think clinically.

Solving situational problems proposed by the teacher, which develop clinical thinking and force students to use the knowledge they have acquired in various subjects related to their specialty.

Active and interactive forms of teaching are widely used in the educational process (work in small groups, stimulation of creative activity, use of computer training programs, conference-style classes).

The teacher monitors students' independent work, preparation of reports, research work, work with patients together with the teacher, interpretation of data from additional research methods, and completion of medical documentation.

The main forms of recording are: plan (simple and detailed), excerpts, and abstracts. During preparation, it is important to compare sources, consider the material being studied, develop an algorithm of activity, and carefully consider your oral presentation.

Recommendations for preparing for the test.

Test – 10-15-20-25 credits. Each question is worth 1 (2) credit.

TOPICS: are indicated in each specific section

Answer requirements: a clear, detailed answer (2 credit/task) or selection of the correct answer to the test task (1 credit/task).

Recommendations for preparing for the test/exam

Requirements for answers and assessment criteria:

A grade of “excellent” (45–50 credits) on the test/exam is given for: correct, complete, and logically structured answers; the ability to use special terms; the ability to illustrate theoretical positions with practical material.

A “good” grade (35–44 credits) on the exam is given for: a correct, complete, and logically structured answer with minor errors or inaccuracies; the ability to use special terms, but with conclusions or generalizations that are not entirely complete.

A “satisfactory” grade (30–34 credits on the exam) is given for: a schematic, incomplete answer; inability to use special terms or ignorance of them; one gross error.

A grade of “unsatisfactory” (< 30 credits on the exam) is given for: answers to all questions on the exam paper with gross errors; inability to use special terminology; inability to give examples of the practical application of scientific knowledge.

Admission to the exam in the discipline is granted with a score of more than 30 credits.

During the semester, a student can earn from 30 to 50 credits.

The minimum score for an exam answer is 30, the maximum is 50.

11. EDUCATIONAL AND METHODOLOGICAL RECOMMENDATIONS FOR TEACHERS

In the process of organizing and conducting the educational process, teachers must be able to plan and organize their time, which allows them to distribute the teaching load and is an important condition for successful teaching of the discipline.

Teachers should actively participate in the educational process and prepare for it. The need for constant preparation for lectures and practical classes is due to the need to reflect modern approaches, views, and data on topics and sections. When preparing for the educational process, it is necessary to study modern methodological recommendations, research results, new technologies, etc.

The aim of the teacher's work should be the effective perception of the material by the students. The following types of educational activities are implemented in the teaching process: lectures, seminars and practical classes, independent work. When implementing various types of educational activities, the teacher should use educational technologies (creation of interactive presentations, educational computer programs, thinking development technologies (effective lectures, tables, group work, etc.)

During practical classes, students' mastery of the lecture material is monitored, patients are supervised, and practical skills are assessed.

Visual aids, surgical instruments, training devices, device simulators, or demonstrations of specific procedures in real-life conditions are used to demonstrate and train practical skills. To assess their clinical thinking skills, students are given situational problems, clinical histories, test assignments, clinical case studies, and visits to medical conferences, consultations, and scientific symposiums.

The most important stage of practical training is independent work by students to master practical skills: in simulated conditions, at the patient's bedside, in the functional diagnostics office, etc. Depending on the specific topic of the class, students independently (or under the supervision of a teacher) interview patients, conduct clinical examinations, observe instrumental diagnostics, study the results of additional examinations, summarize the data, present it in the form of fragments of medical histories, and report the results to the teacher. Achievements are assessed individually for each student, the degree of development of practical skills and their theoretical foundations.

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Solving situational problems proposed by the teacher, which develop clinical thinking and force students to use the knowledge they have acquired in various subjects related to their specialty.

Active and interactive forms of teaching are widely used in the educational process (work in small groups, stimulation of creative activity, use of computer training programs, conference-style classes).

The teacher monitors students' independent work, preparation of reports, research work, work with patients together with the teacher, interpretation of data from additional research methods, and completion of medical documentation.

Working with educational literature is considered a type of educational work and is carried out within the hours allocated for its study. Each student is provided with access to the electronic library collections of the institute and department.

The training of students contributes to the development of their skills in communicating with patients, taking into account ethics and deontology.

Independent work contributes to the development of skills in working with patients, working with literature, analytical thinking, filling out documentation, accuracy, and discipline.

The initial level of students' knowledge is determined by testing, and ongoing assessment of subject mastery is determined by oral questioning during classes, during clinical reviews, when solving typical situational problems, and in test answers.

At the end of the course, interim and final assessments are conducted using tests, practical skills checks, and situational problem solving.

Grading and criteria for tests, written exams, homework assignments, and final exams:

1) - Tests are graded on a scale of 1 credit per correct answer. If a student did not attempt the test, they receive (-1) credit.

2) - Extended response tests are graded according to the following scheme: complete answer – 2 credits, incomplete answer – 1 credit, no answer – 0 credits, student did not attempt the test – (-2) credits.

3) – Homework must be completed by all students in order to be admitted to the final assessment. Late submission will result in a deduction of (-1) credit from the final score.

4) - Criteria for evaluating the presentation report. Conversion from a 100-credit to a 10 (5)-grade system

5) - Criteria for evaluating the abstract. Maximum 10 grades. May be converted to a 5-grade system

10 grades are awarded if all the requirements for writing an abstract are met: the problem is identified and its relevance is justified, a brief analysis of the problem under consideration is made and one's own position is logically presented, conclusions are formulated, the article is analyzed in full, the volume is maintained, and the requirements for formatting are met.

9 grades are given if the following requirements for writing an abstract are met: the problem is identified and its relevance is justified, a brief analysis of the problem under consideration is made and one's own position is logically presented, conclusions are formulated, the article is analyzed in full, but the volume is not maintained and the formatting requirements are not met.

8 grades are given if the main requirements for the abstract are met, but there are some shortcomings. In particular, there are inaccuracies in the presentation of the material; there is no logical sequence in the arguments; the length of the abstract is not sufficient; there are omissions in the formatting.

7 grades – the basic requirements for the abstract have been met, but the following shortcomings have been noted: there are inaccuracies in the presentation of the material; there is no logical sequence in the arguments; conclusions have not been formulated, the volume of the abstract has not been maintained; there are omissions in the formatting

6 grades – there are significant deviations from the requirements for referencing; the topic is only partially covered; there are factual errors in the content of the abstract, there are no conclusions or personal opinion on the issue.

5 grades – there are significant deviations from the requirements for the abstract: the topic is only partially covered; there are factual errors in the presentation of materials and methods, there are no conclusions or personal opinion on the issue, the format is not consistent.

4 grades – there are significant deviations from the requirements for the abstract: the relevance of the topic is not revealed; there are factual errors in the presentation of materials and methods, there are no conclusions or personal views on the issue, and the format is not adhered to.

3 grades – there is no analysis of the relevance of the research topic, approaches, and methods used, while the length of the abstract is formally adhered to.

2 grades – the topic of the abstract is not revealed, there is a significant misunderstanding of the problem. At the same time, the volume of the abstract and formal requirements are met.

1 grade – the topic of the abstract is not revealed, there is a significant misunderstanding of the problem.

0 grades – the abstract has not been submitted by the student.

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