



## CD 8.5.1 SUBJECT CURRICULUM

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## CD 8.5.1 DISCIPLINE CURRICULUM

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### FACULTY OF STOMATOLOGY

### STUDY PROGRAM 0911.1 STOMATOLOGY

### DEPARTMENT OF OTORHINOLARYNGOLOGY

#### APPROVED

at the meeting of the Committee for Quality Assurance and Curriculum Evaluation, Faculty of Stomatology

Minutes no. 3 of 16.02.2018

Committee president, PhD, MD, associate professor  
Stepco Elena [Signature]

#### APPROVED

at the meeting of the Faculty Council, Faculty of Stomatology

Minutes no. 6 of 20.02.2018

Dean of the faculty, PhD, MD, professor  
Ciobanu Sergiu [Signature]



#### APPROVED

at the Meeting of the Department of Otorhinolaryngology  
Minutes no. 2 of 16.01.2018

Head of the Department of Otorhinolaryngology  
PhD, MD, Professor, Academician ASM  
Ababii Ion [Signature]

## CURRICULUM

### SUBJECT: OTORHINOLARYNGOLOGY

#### Integrated studies

Course type: **Compulsory**

Chișinău, 2018



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### I. PRELIMINARY

Otorhinolaryngology is the specialty dealing with malformative, traumatic, inflammatory and tumor diseases of the ear, temporal bone, nose and paranasal sinuses, oral cavity, pharynx, larynx, trachea, esophagus, as well as other adjacent structures. It also involves investigation and medical treatment, rehabilitation and surgical treatment of acoustic and vestibular disorders, taste and smell impairment, cranial nerves damage as well as hearing and sound affections that are functionally important for human communication. Along with neurosurgeons, ophthalmologists, oral and maxillofacial surgeons, otorhinolaryngologists deal with disorders that involve the rhino- and otobasis, infratemporal fossa, and orbits. Along with the thoracic surgeon, the otolaryngologist deals with the trachea, esophagus and areas adjacent to thoracic isthmus. To sum it up, Otorhinolaryngology includes the study of functions and pathologies of the ear, nose and paranasal sinuses, oral cavity, pharynx, larynx, trachea and esophagus, as well as areas adjacent to these organs and cavities. The specialty also deals with communication problems caused by hearing and speech impairments. It also refers to the following major branches as audiology, otoneurosurgery, phoniatriy and neurology and its related cranial nerve pathology. Knowledge of immunology, allergology, and oncology, as well as plastic and reconstructive surgery of the cervico-facial regions is also required.

- **Purpose of curriculum in professional training**

Enhancement of the fundamental knowledge of ENT disorders and its implementation in practice; knowledge of evolution, diagnosis, appropriate treatment and prophylaxis of ENT disorders; clinical judgment development and medical knowledge synthesis - the key elements in the training of a healthcare worker.

- Languages of study: Romanian, Russian, English, French;
- Target public: 5<sup>th</sup> year students, Faculty of Medicine I and II.

### II. SUBJECT MANAGEMENT

Subject code		<b>S.07.O.087</b>	
Subject name		<b>Otorhinolaryngology</b>	
Responsible for subject		<b>Ion Ababii, PhD MD, Professor, Academician ASM</b>	
Year	<b>IV</b>	Semesters	<b>VII</b>
Total hour amount , including:			<b>60</b>
Course	<b>16</b>	Practical work	<b>28</b>
Seminars	<b>12</b>	Individual work	<b>4</b>
Form of assessment	<b>E</b>	Number of credits	<b>2</b>

### III. LEARNING OBJECTIVES

*At the end of the course, the students will be able to:*

- **at knowledge and comprehension level:**

Diseases of the nose and paranasal sinuses

- Revision of nasal anatomy and nasal physiology
- Nasal pathophysiological syndromes
- Inflammatory and skin diseases of the nasal pyramid and vestibule (nasal furuncle, eczema, rhinophyma etc.)
- Acute and chronic nonspecific rhinitis
- Rhinitis in infectious-contagious and chronic diseases (syphilis, TB, scleroma)
- Vasomotor rhinitis, nasal polyposis
- Acute and chronic sinusitis
- Nasal and sinus traumas



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- Foreign bodies in the nasal fossae
- Epistaxis
- Benign and malignant tumors of the nose

### Pharynx diseases

- pharynx anatomy and physiology
- Pharyngeal malformations
- Specific and non-specific acute angina
- Suppurative complications of angina
- Angina in haematological syndromes
- Acute and chronic adenoiditis. Complications.
- Chronic tonsillitis
- Acute and chronic pharyngitis
- Benign and malignant tumors of the pharynx
- Pharyngeal foreign bodies
- Pharyngeal trauma

### Laryngeal diseases

- Larynx anatomy and physiology
- Laryngeal malformations
- Laryngeal foreign bodies
- Laryngeal trauma
- Specific and non-specific acute laryngitis
- Specific and non-specific chronic laryngitis
- Acute and chronic laryngeal stenosis
- Benign and malignant tumors of the larynx

### Tracheo-bronchial and esophageal disorders

- Tracheobronchial and esophageal foreign bodies
- Esophageal burns /combustion
- Post-caustic esophageal stenosis

### Ear disorders

- Anatomy and physiology of the auditory-vestibular system
- Ear malformations
- Auricular trauma
- Otitis externa, otomycosis, auricular furuncle
- Acute suppurative and nonsuppurative otitis media
- Chronic suppurative and nonsuppurative otitis media
- Complications of acute and chronic otitis media
- Hypoacusia (transmission, mixed), otosclerosis
- Perceptive hypoacusia
- Meniere's syndrome

- ***at application level:***

- Inspection and palpation of the cranial-facial and cervical regions
- Oropharyngoscopy
- Narhinoscopy and anterior and posterior rhinoscopy
- Functional examination, fossae permeability, examination of olfactory function



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- Technique of anterior and posterior packing in epistaxis
- Hypopharyngoscopy and laryngoscopy
- Tracheotomy technique
- Endoscopy technique
- Otoscopy in adults and children
- Examination of hearing function
- Presentation of audiometry range and technique samples
- Presentation of audiograms with different types of deafness

• **at integration level:**

- to appreciate the importance of otorhinolaryngology in the context of medicine;
- to know about the development of otorhinolaryngology in Europe and Moldova;
- to understand interrelations between otorhinolaryngology and other fundamental subjects.

### IV. PRELIMINARY REQUIREMENTS

The specialty of otorhinolaryngology comprises the study of the functions and disorders of the ear, nose and paranasal sinuses, oral cavity, pharynx, larynx, trachea and esophagus, as well as regions adjacent to these organs and cavities. The functions of ENT organs are of great importance for human communication, digestion, breathing, etc. Future physicians, regardless of their specialty, have to know anatomy, physiology and pathophysiology of ENT organs as well as to provide first aid in case of emergency. The future physician should refer the patient in time to the ENT specialist when suspecting any otorhinolaryngologic disorder.

To get solid knowledge of ENT specialty it is necessary to acquire knowledge in Topographic Anatomy, Physiology and Pathophysiology, Allergology and Immunology, Medical Imaging, Neurology, Pharmacology, obtained at University.

### V. TOPICS AND APPROXIMATE HOUR DISTRIBUTION

No.	TOPIC	Number of hours		
		Lectures	PW/ S	Individual work
1.	Objectives and tasks of otorhinolaryngology in medicine. The significance of the ENT organs in human life and activity. History of ENT Development in Europe and Republic of Moldova. General concepts of examination methods in ENT. General data about the anatomical structure and the functions of the nose and paranasal sinuses. Anatomical and functional interrelations of nose and paranasal sinuses with other organs. Particularities of innervation and vascularization. Acute and chronic rhinitis: etiopathogenesis, classification, clinical picture, diagnosis and treatment.	2	5	
2.	Acute and chronic sinusitis: classification, clinical picture, diagnosis and treatment. Contemporary concept of rhinosinusal surgery. Rhinosinogenic complications: endocranial, ocular, auricular, pharyngeal, laryngeal, bronchopulmonary. Clinical picture, positive and differential diagnosis, treatment, prophylaxis. Rhinosinusal allergies. Traumas and Epistaxis. Benign and malignant tumors.	2	5	1
3.	Concepts of clinical anatomy and physiology of the auditory and vestibular apparatus. Acute and recurrent otitis media. Etiopathogenesis. Classification. Symptoms. Clinical picture and disease evolution. Treatment. Prophylaxis.	2	5	3
4.	Chronic suppurative otitis media. Classification. Clinical picture.	2	5	3



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No.	TOPIC	Number of hours		
		Lectures	PW/ S	Individual work
	Evolution of the disease. Treatment. Prophylaxis. Nonsuppurative diseases of the middle and inner ear. Sudden Sensorineural Hearing Loss.			
5.	Complications of otitis media. Etiology. Classification. Diagnosis. Treatment and prophylaxis.	2	5	2
6.	Bucco-pharyngeal clinical anatomy and physiology. Examination methods. Waldeyer's pharyngeal lymphoid ring and its importance in maintaining homeostasis. General and local immunity.	2	5	2
7.	Angina. Classification. Clinical presentation and disease evolution. Principles of treatment and prophylaxis. Chronic tonsillitis. Classification. Clinical presentation. Principles of treatment and prophylaxis. Adeno-tonsillar hypertrophy in children.	2	5	2
8.	Embryology and clinical anatomy of the larynx, trachea, bronchi and esophagus. Vital, social and professional importance of the larynx. Laryngeal stenosis. Definition. Classification. Acute laryngotracheitis. Tracheotomy and prolonged intubation.	2	5	3
<b>Total</b>		<b>16</b>	<b>40</b>	<b>39</b>
		<b>95</b>		

## VI. REFERENCE OBJECTIVES AND CONTENT UNITS

### Objectives and content units

At the end of the course, the student will be able to:

- **to define the topic-related syndrome;**
- **to know:**
  - detailed description of syndromes, including; pathophysiology, semiology, modern methods of investigation, significance of syndromes in nosological diagnosis;
  - syndrome-related diseases ;
  - incidence, modern aspects of etiology and pathogenesis of diseases presented in each subject;
  - clinical and paraclinical (laboratory and instrumental) diagnosis of each nosological entity along with its argumentation.
- **To prove the following skills:**
  - to carry out clinical and paraclinical (laboratory and instrumental) diagnosis of each nosological entity along with its argumentation;
  - to perform differential diagnosis and its argumentation;
  - to make a detailed clinical diagnosis (underlying disease, complications and comorbidities);
  - to draw up a paraclinical evaluation plan with arguments;
  - to draw up a personalized treatment plan (underlying disease and comorbidities) with arguments.
- **to apply:**
  - acquired knowledge and practical skills;
  - diagnostic algorithm, differential diagnosis and treatment in emergencies;
  - writing of a medical report (follow-up patient form; epicrisis; patient admission and discharge forms ;extract from the follow-up patient form; statistical sheet);
- **to integrate** the acquired knowledge within basic, preclinical and clinical disciplines.

## VII.PROFESSIONAL (SPECIFIC (SS) AND TRANSVERSAL (TS) SKILLS AND LEARNING OUTCOMES



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### Professional (specific) skills (SS)

**SS1:** To get acquainted with theoretical basis of clinical anatomy and physiology of the aerodigestive tract and ear canals, general principles of patient examination, clinical and paraclinical data analysis and interpretation; to know the legal and normative framework in the field, means of prevention, the rights and duties of a healthcare worker.

**SS2:** To know and simulate clinical and paraclinical examination of patients with ENT diseases; to assess paraclinical examination data; to assess and describe aseptic and antiseptic methods; to describe the substances and indications for the use; to know and simulate preparation for surgery. To know and describe the patient's preparation for surgery.

**SS3:** To fill in the patient medical records; to perform physical examination and laboratory tests and draft instructions as appropriate to the type of their argumentation. To determine options of establishing the diagnosis and treatment planning. To develop a data collection algorithm, as well as to deal with inpatients at the Department of Otorhinolaryngology.

**SS4:** To perform data analysis of laboratory investigations and their description. To analyze the radiological clusters; to be able to assess and describe the anatomical formations based on computed tomography.

**SS5:** To describe types of prophylaxis, and their application levels (among individuals, group, and society). To evaluate the control methods of sterilization for used materials and instruments.

**SS6:** To prove and apply the acquired knowledge in clinical and paraclinical assessment of the patient. To select and give arguments for communication techniques, data collection and patient preparation for surgery. To promote tolerance and compassion towards patients.

### Transversal skills(TS)

**TS1:** To apply professional assessment standards, follow professional ethics, as well as principles of current legislation. To promote logical reasoning, practical applicability, assessment and self-assessment while making decisions.

**TS2:** To perform activities and exercise the roles specific to team work. To promote initiative, dialogue, cooperation, positive attitude and respect to people, as well as empathy, altruism and continuous self-improvement;

**TS3:** To assess systematically the personal skills, roles and expectations; to apply self-assessment to learning processes, acquired skills and professional needs; to use effectively linguistic skills; to possess IT, research and communication skills; to deliver quality services and adapt to the dynamic requirements of healthcare, personal and professional development.

### Learning objectives

- to know evolutionary particularities of ENT diseases
- To know the methods of differential diagnosis of ENT diseases.
- To know the importance of clinical, laboratory and instrumental investigations in differential diagnosis.
- To be able to prescribe a customized treatment in ENT-diseased patients.
- To be able to establish connections between otorhinolaryngology and other medical specialties (phthiology, oncology, hematology, etc.), as well as perform interdisciplinary clinical syntheses.
- To be able to learn daily and keep up to date with new achievements within internal medicine.

## VII.STUDENT INDIVIDUAL WORK

No.	Expected	Acquisition strategies	Assessment criteria	Period of
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	product			acquisition
1.	Informational sources	<p>A detailed study of the lesson content on a specific topic.</p> <p>Reading of topic-related questions, which require considerations over the subject.</p> <p>Getting to know the list of additional data sources.</p> <p>Selecting additional sources of information related to the topic.</p> <p>Reading the text thoroughly as well as taking notes of the essential content.</p> <p>Drafting conclusions on important topic/subject - related issues.</p>	Ability to select the most essential; interpretation skills; total amount of work.	During the module
2.	On-line materials	Assessment of online materials from content-related websites, as well as from other database and specialty literature.	Presentation of the results during the practical lessons	During module
3.	Various teaching methods		Total work amount, level of comprehension, level of scientific reasoning, quality of conclusions, elements of creativity, clinical reasoning skills, practical skills, shaping personal attitude.	During module
4.	Activity of patient examination during practical classes and shifts	Examination of patients; appropriate data assessment of the patient in laboratory and instrumental examination; learning diagnosis skills, differential diagnosis and individual treatment.	Appropriate argumentation of diagnosis, investigation and treatment planning of the patient.	Daily, during module
5.	Preparing and delivering reports/ presentation	Selecting the topics for presentations/reports and terms of accomplishment. Peer assessment. Teacher's assessment.	Total work amount, level of comprehension of topic/ presentation, level of scientific reasoning, quality of conclusions, elements of creativity, shaping personal attitude, graphic presentation, presentation methods.	During module



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### IX. METHODS OF TEACHING, LEARNING AND ASSESSMENT

- **Teaching and learning methods**

Otorhinolaryngology is classically taught via. lectures, practical classes, seminars, students individual work and practical internship. The theoretical course is carried out via. lecturers. The students will study the following ENT examination particularities during the practical classes : craniofacial and cervical region inspection and palpation; oropharyngoscopy; nasoscopy; anterior and posterior rhinoscopy; fossae permeability; olfactory function examination; anterior and posterior nasal packing technique in epistaxis; hypolaryngoscopy and laryngoscopy; tracheotomy; endoscopy; adult and child otoscopy; auditory function examination; presentation of audiometry range and technique samples; presentation of audiograms with different types of deafness.

- **Teaching strategies / techniques**

The following teaching strategies are applied during the lectures:

- introductory strategies
- current strategies
- synthesis
- debates

Practical lessons include the following teaching strategies:

- Case Study
- Group work
- Individual work
- Clinical observation

To acquire knowledge regarding ENT course, students are required:

1. To attend courses and practical lessons systematically, as well as perform individual work;
2. To summarize and highlight the most important issues;
3. To ask questions and clarify the key issues;
4. To perform group data processing in order to acquire and synthesize the obtained information;
5. To have good time management skills in order to get necessary knowledge.

**Assessment Methods** (by specifying the methods used for calculating the final grade). All the students will be evaluated on a daily basis, whereas their academic activity periodically. The assessment is valid, objective and reliable and refers to cognitive, psychomotor and affective domains.

Formative, continuous and summative (final) assessment refers to theoretical basis, as well as on clinical practices separately.

**Current:** There are 6 summative assessments within ENT course:

1. Summative assessment no.1: Anatomical structure and functions of the nose and paranasal sinuses.
2. Summative assessment no.2: Clinical anatomy and physiology of the auditory and vestibular system. Ear disorders
3. Summative assessment no.3: Embryology. Clinical anatomy, physiology and pathology of the pharynx and oral cavity.
4. Summative assessment no.4: Embryology, clinical anatomy, physiology and pathology of the larynx, trachea, bronchi and esophagus.

The annual average mark is calculated on the basis of summative assessment marks and makes up 0.5 of the final mark.

**Final:** The students with the annual average score below 5, as well as those who have not recovered missed practical lessons are not accepted to ENT exam. ENT examination consists of practical skills assessment, multiple choice test ("Test Editor" Nicolae Testemitanu SUMPh version) and oral test.

The exam subjects are approved at the chair meeting and are given to students at least one month prior to the examination session.





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The multiple choice test consists of 100 tests comprising all the subjects studied within the ENT course. The total allotted test time is 2 hours. The test score ranges from 0 to 10.

The final mark is calculated based on positive grades ( $\geq 5$ ) of the annual average, calculated at the end of the course - 50%; from test-control - 20% and oral test- 30%. The annual average mark and final examination marks (computer test, written test, oral test) will be expressed in numbers according to the mark grading scale (see the table below), while the final mark will be expressed by two decimal places, which will be recorded in the student's record card (gradebook).

### Scaling of assessment marks

#### Mark rounding

Grid of intermediary marks (annual average mark, final exam marks)	Mark system	grading	ECTS Equivalent
<b>1,00-3,00</b>	<b>2</b>		<b>F</b>
<b>3,01-4,99</b>	<b>4</b>		<b>FX</b>
<b>5,00</b>	<b>5</b>		<b>E</b>
<b>5,01-5,50</b>	<b>5,5</b>		
<b>5,51-6,0</b>	<b>6</b>		
<b>6,01-6,50</b>	<b>6,5</b>		<b>D</b>
<b>6,51-7,00</b>	<b>7</b>		
<b>7,01-7,50</b>	<b>7,5</b>		
<b>7,51-8,00</b>	<b>8</b>		<b>C</b>
<b>8,01-8,50</b>	<b>8,5</b>		
<b>8,51-8,00</b>	<b>9</b>		
<b>9,01-9,50</b>	<b>9,5</b>		<b>B</b>
<b>9,51-10,0</b>	<b>10</b>		

*Students' failure to attend the final examination is recorded as „absent” and is equivalent to „0” (zero). Students have the right to retake the examination twice in case of failure.*

## X. RECOMMENDED BIBLIOGRAPHY:

### A. Compulsory:

1. Ababii I., Popa VI., Antohi I., Sandul A., ș.a. Otorinolaringologie. Chișinău. CEP Medicina al USMF. 2000.
2. Ababii I., Popa VI. Otorinolaringologie pentru medicii de familie. 2002.
3. Popa VI., Andriuța V., Godonoaga N. Chid otorinolaringologie Chișinău Universitar, 1994.
4. Martin Burton «Hall and colman' s. Diseases of the ear, nose and throat”, Chirchill livingstone, 2000
5. Legent F., Narcy P., Beauvillan C., „ORL Pathologie cervico- faciale”, Masson, 2003
6. Пальчун В.Т., и соавт. Руководство по оториноларингологии. М.Медицинаю 2015

### B. Supplimentary:

1. Albert S., Bozec H. ORL et chirurgie cervico-facială. Ellipses 2002. 330 pag.



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2. Garabedian E.N., Bobin S. ORL de L'enfant. 1996 Paris P.392
3. Byron J. Bailey et al.; Head & Neck Surgery - Otolaryngology Volume 1,2. 1993.
4. Sarofoleanu, Lăzeanu M. Breviar de otorinolaringologie. București.