



## CD 8.5.1 SUBJECT CURRICULUM

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### FACULTY OF MEDICINE

### SYLLABUS

### 0912.1 MEDICINE

### DEPARTMENT OF OTORHINOLARYNGOLOGY

#### APPROVED

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

Minutes no. 2 of 18.03.2018

Chairman of the Committee, PhD.MD, associate professor

Suman Serghei \_\_\_\_\_

#### APPROVED

at the meeting of the Faculty Council, Faculty of Medicine II

Minutes no. 4 of 20.03.2018

Dean of the faculty, PhD.MD, associate professor

Bețiu Mircea \_\_\_\_\_

#### 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 \_\_\_\_\_

## CURRICULUM

### SUBJECT: OTORHINOLARYNGOLOGY

#### Integrated studies

Course type: **Compulsory**

Chișinău, 2018



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### I. PRELIMINARY

Otorhinolaryngology is the specialty that deals with malformative, traumatic, inflammatory and tumoral diseases of the ear, temporal bone, nose and paranasal sinuses, oral cavity, pharynx, larynx, trachea, esophagus, and adjacent structures. It also includes investigation and medical treatment, rehabilitation and surgical treatment of hearing and vestibular disorders, sensations of taste and smell, disorders of the cranial nerves and hearing and sound impairment, important functions in human communication.

Along with neurosurgeon, ophthalmologist, oral and maxillofacial surgeon, otorhinolaryngologist deals with affections of the rhinobase, infratemporal fossa, otobase and orbit. Together with the chest surgeon, otorhinolaryngologist deals with the diseases/disorders of the trachea, esophagus and areas adjacent to the thoracic isthmus. Otorhinolaryngology includes 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 specialty also deals with communication problems caused by hearing and speech disorders. Important branches of specialties are also: audiology, otoneurosurgery, phoniatriy and neurology related to the cranial nerve disorders. Knowledge of immunology, allergology, oncology as well as plastic and reconstructive surgery of the cervical-facial regions is also required.

- ***Curriculum purpose in the professional training***

To strengthen the fundamental knowledge of ENT disorders and their implementation in practice; knowledge of evolution, diagnosis, appropriate treatment and prophylaxis of ENT disorders, development of clinical reasoning and medical synthesis - defining elements in the training of any physician.

- 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.10.O.096</b>                                     |             |
| Subject name                      |           | <b>Otorhinolaryngology</b>                            |             |
| Subject leader                    |           | <b>Ion Ababii, PhD MD, Professor, Academician ASM</b> |             |
| Year                              | <b>V</b>  | Semesters   | <b>IX-X</b> |
| Total number of hours, including: |           |   | <b>120</b>  |
| Course                            | <b>24</b> | Practical work  | <b>30</b>   |
| Seminars                          | <b>30</b> | Individual work                                       | <b>30</b>   |
| Clinical internship               |           |   | <b>6</b>    |
| Form of assessment                | <b>E</b>  | Number of credits                                     | <b>4</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 the concepts of nasal anatomy and physiology
- Pathophysiology of nose syndromes
- Inflammatory and dermatological disorders of the nasal pyramid and nasal vestibule (nasal furuncle, eczema, rhinophyma etc.)
- Acute and chronic nonspecific rhinitis
- Rhinitis in infectious-contagious and chronic diseases (syphilis, TB, scleroma)



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- Vasomotor rhinitis, nasal polyposis
- Acute and chronic sinusitis
- Nasal-sinus trauma
- Foreign bodies in the nasal fossae
- Epistaxis
- Benign and malignant tumors of the nose

### Diseases of the pharynx

- pharynx anatomy and physiology
- Pharyngeal malformations
- Specific and non-specific acute angina
- Suppurative complications of angina
- Angina in haematological syndromes
- Acute and chronic adenoiditis, their complications

### Chronic tonsillitis

- Acute and chronic pharyngitis
- Benign and malignant tumors of the pharynx
- Foreign bodies of the pharynx
- Pharyngeal trauma

### Laryngeal diseases

#### laryngeal 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 laryngeal tumors

### 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
- External otitis, 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
- Narinoscopy and anterior and posterior rhinoscopy
- Functional examination, fossae permeability, examination of olfactory function
- Technique of anterior and posterior packing in epistaxis



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- Hypopharyngoscopy and laryngoscopy
- Tracheotomy technique
- Endoscopy technique
- Otoscopy in adult and child
- Examination of the 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 the development of otorhinolaryngology in Europe and Moldova;
- to understand interrelations between otorhinolaryngology and other fundamental subjects.

### IV. PRELIMINARY REQUIREMENTS

The specialty of otorhinolaryngology includes the study of the functions and pathology 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 in human communication, digestion, breathing, etc. The future physician, regardless of his specialty, has to know anatomy, physiology and pathophysiology of ENT organs as well as the first aid in case of emergency. The future physician should refer the patient in time to the ENT specialist in an assumption of an otorhinolaryngologic disorder.

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

### V. TOPICS AND APPROXIMATE HOUR DISTRIBUTION

| No. | TOPIC  | Number of hours |          |                    |
|-----|--|-----------------|----------|--------------------|
|     |  | Lectures        | PW/<br>S | Individual<br>work |
| 1.  | Otorhinolaryngology –object of study and tasks. Significance of ENT organs in human life and activity. History of ENT development in Europe and Moldova. General concepts of examination methods in ENT. Objective and functional examination in ENT. The role of the anamnesis in establishing the diagnosis. Paraclinical examination methods. Endoscopic and microscopic investigations in ENT. ENT practice setting and equipment.   | 2               | 5        | 2                  |
| 2.  | General data about the anatomical structure and functions of the nose and paranasal sinuses. Anatomical and functional interrelations of the nose and paranasal sinuses with other organs. Particularities of innervation and vascularization. Semiology of nose-sinus diseases. Anomalies, congenital malformations and nose deformities. Choanal atresia. Acute and chronic rhinitis: etiopathogenesis, classification, clinical picture, diagnosis and treatment. Hematoma and of nasal septal abscess. Nasal furuncle. | 2               | 5        | 3                  |
| 3.  | Acute and chronic sinusitis: classification, clinical picture, diagnosis and treatment. Contemporary concept of rhinosinusal surgery. Rhinosinusogenic complications: endocranial, ocular, auricular, pharyngeal, laryngeal, bronchopulmonary. Clinical picture, positive and differential diagnosis, treatment, prophylaxis. Benign and malignant rhinosinusal tumors.  | 2               | 5        | 2                  |



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| No.          | TOPIC  | Number of hours |           |                    |
|--------------|--|-----------------|-----------|--------------------|
|              |  | Lectures        | PW/<br>S  | Individual<br>work |
| 4.           | Concepts of clinical anatomy and physiology of the auditory and vestibular system.   | 2               | 5         | 3                  |
| 5.           | Otic symptomatology. Abnormalities of the external ear. Inflammatory diseases of the external ear. Otomycosis. Acute otitis media. Etiopathogenesis, clinic and treatment. Chronic suppurative otitis media. Classification. Clinical picture. Evolution of the disease. Treatment. Prophylaxis. Labyrinthitis.  | 2               | 5         | 2                  |
| 6.           | Nonsuppurative diseases of the ear. Acute and chronic tubal-tympanic catarrh. Serous-mucous otitis. Adhesive otitis. Otosclerosis. Meniere's disease. Perceptive deafness. Sudden idiopathic deafness. Tinnitus and vertigo.   | 2               | 5         | 3                  |
| 7.           | Complications of otitis media: mastoiditis (atypical forms), extra and subdural abscess, cerebral and cerebellous abscess, otogenic sepsis. Diagnosis and treatment  | 2               | 5         | 2                  |
| 8.           | Pharynx anatomy and physiology. Examination methods. Waldeyer's pharyngeal lymphatic ring and its importance in maintaining homeostasis, general and local immunity. Pharyngeal symptomatology.  | 2               | 5         | 3                  |
| 9.           | Acute and chronic adenoiditis. Juvenile nasopharyngeal angiofibroma. Palatine tonsil hypertrophy. Indications for tonsillectomy. Acute and chronic pharyngitis. Pharyngomycosis. Angina. Classification. Clinical picture and disease progression. Principles of treatment and prophylaxis. Tonsillitis complications. Chronic tonsillitis. Classification. Clinical picture. Principles of treatment and prophylaxis. | 2               | 5         | 2                  |
| 10.          | Embryology and clinical anatomy of the larynx, trachea, bronchi and esophagus. Vital, social and professional importance of the larynx. Singing voice.   | 2               | 5         | 3                  |
| 11.          | Congenital malformations of the larynx. Stridor, diaphragms and laryngocele. Acute and chronic laryngitis. Specific chronic laryngitis: tuberculosis, syphilis and scleroma. Mycotic laryngitis. Acute stenotic laryngotracheitis in the child. Laryngeal stenosis. Definition. Classification. Tracheotomy and prolonged intubation.  | 2               | 5         | 2                  |
| 12.          | Benign and malignant tumors of ENT organs. Occupational diseases of the upper respiratory tract and ear. Etiopathogenesis. Pathological anatomy. Classification. Diagnosis. Treatment. Prophylaxis. Expertise in ENT. Emergencies in ENT: foreign bodies of the upper and lower airways. Traumatism. Epistaxis. Esophageal burns.  | 2               | 5         | 3                  |
| <b>Total</b> |  | <b>24</b>       | <b>60</b> | <b>30</b>          |
|              |  | <b>114</b>      |           |                    |



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### VI. INSTRUCTIONAL OBJECTIVES AND CONTENT UNITS

#### Objectives and content units

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

- **to define the syndrome discussed in each theme;**
- **to know:**
  - detailed description of syndromes, including; pathophysiology, semiology, modern methods of investigation, significance of syndromes in nosological diagnosis;
  - diseases manifested by a syndrome;
  - incidence, modern aspects of etiology and pathogenesis of diseases discussed in each subject;
  - clinical and paraclinical (laboratory and instrumental) diagnosis of each nosological entity along with its argumentation.
- **show the ability:**
  - 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:**
  - accumulated knowledge and practical skills;
  - diagnostic algorithm, differential diagnosis and treatment in emergency situations;
- medical report writing (observation sheet, epicrisis, admission and discharge sheet, observation sheet and statistical sheet);
- **to integrate** the acquired knowledge in the fields of fundamental, preclinical and clinical subjects.

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

#### ✓ Professional (specific) skills (SS)

##### ✓ clinical skills;

- ✓ to be able to take a suitable clinical history
- ✓ to be able to demonstrate and prove relevant clinical manifestations
- ✓ to be able to properly direct and interpret the results of investigations
- ✓ to be able to form and coordinate a multidisciplinary team and to manage patients with ENT diseases.

##### ✓ Transversal skills(TS)

- ✓ to improve decision-making autonomy
- ✓ to form personal attitudes
- ✓ to be able to interact socially and engage in role-based teamwork
- ✓ to improve digital skills
- ✓ to develop different learning techniques
- ✓ to select and analyze scientific literature on clinical cases and to draw conclusions.

##### ✓ Learning outcomes

- to know evolutionary peculiarities of ENT diseases
- to be able to prescribe and customize treatment for patients with ENT diseases
- to be able to establish interrelationship between otorhinolaryngology and other medical





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specialties (phthysiology, oncology, hematology, etc.) and to perform interdisciplinary clinical syntheses.

- be able to learn daily and keep up to date with new achievements in internal medicine.

### VIII.INDIVIDUAL WORK OF STUDENTS

| No. | Expected product  | Work strategies   | Assessment criteria  | Period of accomplishment |
|-----|---|---|--|--------------------------|
| 1.  | Work with informational sources                                     | Attentive textbook lesson studying on the specific topic.<br>Reading the questions from the topic, demanding meditation over the subject.<br>Getting to know the list of additional informational sources.<br>Selecting the additional informative source on the topic.<br>Reading the text attentively as well as rendering the essential content.<br>Drafting conclusions related to the importance of the topic. | Ability to select the most essential, performing skills; the amount of work performed.   | During module            |
| 2.  | Work with on-line materials   | Assessment of on-line materials from WEB page on the subject as well as from other database and specialty literature.   | Presentation of the results at practical lessons   | During module            |
| 3.  | Applying various teaching methods                                   |   | Work amount, level of understanding the essence of various subjects, level of scientific reasoning, quality of conclusions, creativity elements, clinical reasoning skills, practical skills, shaping personal attitude. | During module            |
| 4.  | Activity of patient examination during practical classes and shifts | Examination of patients, appropriate assessment of data obtained during patient examination, laboratory and instrumental examination; learning the diagnosis  | Appropriate diagnosis argumentation and conclusions, definite treatment and investigation treatment planning.  | Daily, during module     |



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|    |                     | skills, differential diagnosis and individual treatment.                                    |  |               |
| 5. | Peport presentation | Selecting the topics of presentations/reports and accomplishment terms. Coworkers' reviews. | Work amount, level of understanding the essence of various subjects, level of scientific reasoning, quality of conclusions, creativity elements, building personal attitude, graphic presentation, presentation methods. | During module |

### IX. TEACHING – LEARNING – ASSESSMENT METHODOLOGY

#### • *Teaching and learning methods*

Otorhinolaryngology is taught classically: lectures, practical works, seminars, individual work and practical internship. The theoretical course is delivered by lecturers. The students study examination peculiarities of ENT organs at practical classes: cranio-facial and cervical region inspection and palpation, oropharyngoscopy, nasoscopy, anterior and posterior rhinoscopy, fossae permeability, olfactory function examination, anterior and posterior packing technique in epistaxis, hypolaryngoscopy and laryngoscopy, tracheotomy technique, endoscopy technique, adult and child otoscopy, auditory function examination, presentation of audiometry technique samples, presentation of audiograms with different types of deafness.

#### • *Teaching strategies / techniques*

The following teaching strategies are applied at lectures:

- introductory strategies
- current strategies
- synthesis
- debates

During practical lessons the following teaching strategies are used:

- case Study
- group work
- individual work
- clinical observation

To acquire knowledge in the ENT course, it is necessary:

1. to attend systematically courses and practical lessons, as well as conscious individual work is required;
2. to summarize and highlight the most important matters;
3. to ask questions and to clarify the key things;
4. to do a group processing of the material taught, to acquire and synthesize the information obtained;
5. rational time management to get the necessary knowledge.

**Methods of assessment** (including an indication on how the final grade is calculated)

All the students will be evaluated daily, but their academic activities periodically. The assessment is valid, objective and reliable and refers to cognitive, psychomotor and affective domains.

Formative, continuous and summative (final) assessment is based on theory, as well as on clinical practices separately.

**Current:** There are 6 summative assessments in the ENT course:

1. Summative assessment no.1: Anatomical structure of nasal and paranasal sinuses functions.





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- Summative assessment no.2: Rhinosinusal pathology.
- Summative assessment no.3: Clinical anatomy and physiology of the auditory and vestibular system.
- Summative assessment no.4: Ear problems.
- Summative assessment no.5: Embryology, clinical anatomy, physiology and pathology of the pharynx and oral cavity.
- Summative assessment no. 6: Embryology, clinical anatomy, physiology and pathology of the larynx, trachea, bronchi and esophagus.

On the basis of summative assessment marks, the annual average mark is calculated, accounting for 0.3 of the final mark.

**Final:** The students with the annual average score below 5, as well as those who have not recovered absences from practical lessons are not accepted at ENT exam. ENT examination consists of the presentation of practical skills, 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. The multiple choice test consists of 100 tests comprising all the subjects studied within the ENT course. The total time allotted for test is 2 hours. All tests are scored with grades from 0 to 10.

### Scaling of marks for assessments Method of mark rounding

| Grid of intermediary marks (annual average mark, final examination mark) | Grading system | ECTS Equivalent |
|--|----------------|-----------------|
| 1,00-3,00  | 2              | F               |
| 3,01-4,99  | 4              | FX              |
| 5,00   | 5              | E               |
| 5,01-5,50  | 5,5            |                 |
| 5,51-6,0   | 6              |                 |
| 6,01-6,50  | 6,5            | D               |
| 6,51-7,00  | 7              |                 |
| 7,01-7,50  | 7,5            | C               |
| 7,51-8,00  | 8              |                 |
| 8,01-8,50  | 8,5            | B               |
| 8,51-9,00  | 9              |                 |
| 9,01-9,50  | 9,5            | A               |
| 9,51-10,0  | 10             |                 |

The annual average mark and final examination marks (computer test, written test, oral test) will be expressed in numbers according to the grid of marks (see table above), while the final mark will be expressed in a number with two decimal digits, which will be recorded in the student's report card (gradebook).

*Students' unexcused absence at the final examination is qualified with „absent” and is equivalent to „0” (zero). The students have the right to retake the failed examination twice.*



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