

<i>Name of the course</i>	<b>OTORHINOLARYNGOLOGY – HEAD AND NECK SURGERY</b>			<i>Code</i>	
<i>Study programme Cycle</i>	Medical studies in English Integrated university study			<i>Year of study</i>	5
<i>Credits (ECTS):</i>	7	<i>Semester</i>	10	Number of hours: (L-lecture + S- seminary + P- Practical)	75 (L-25+S-10 +P-40)
<i>Status of the course:</i>	Mandatory	<i>Requirements:</i>	Pass all fourth year exams	<i>Comparative conditions:</i>	/
<i>Access to course:</i>	Fifth year medical students			<i>Hours of instruction:</i>	According to schedule
<i>Course teacher:</i>	Assoc Prof Boris Jelavić, MD, PhD				
<i>Consultations:</i>	As agreed with students (by phone and e-mail)				
<i>E-mail address and phone number:</i>	slav.boris@tel.net.ba; 036 / 336 - 306, - 310; - 157				
<i>Associate teachers</i>	1. Asst Prof Josip Lesko, MD, PhD, the School of Medicine University of Zagreb, the School of Medicine University of Mostar; 2. Tomislav Sušac, MD, Senior Assistant, the School of Medicine University of Mostar.				
<i>Consultations:</i>	As agreed with students (by phone and e-mail)				
<i>E-mail address and phone number:</i>	tomislavsusac@gmail.com; 036 / 336 - 306, - 157				
<i>Course objectives:</i>	<ul style="list-style-type: none"> <li>- To provide the undergraduate medical student with adequate knowledge about causes, clinical picture, diagnostics and treatment of the pathological conditions of the ear, nose and paranasal sinuses, oral cavity, pharynx, oesophagus, larynx, trachea, thyroid and parathyroid glands, major salivary glands, and other regions of the face and neck which are an otorhinolaryngologist's area of interest.</li> <li>- To provide the medical student with adequate skills enabling diagnostics, first aid and basic treatment of some otorhinolaryngological problems at the level of primary practice.</li> <li>- To promote positive attitudes that are important for medical student in communication with patients, colleagues and co-workers in the medical field.</li> </ul>				
<i>Learning outcomes (general and specific competences):</i>	<p>After attending and passing the course, the students will gain knowledge, skills and attitudes listed below:</p> <p><b>General competences:</b></p> <p>During the study, the students will be able to plan self-study in a critical and self-critical way of investigating scientific truths.</p> <p>The students will be able to demonstrate personality qualities (team work</p>				

	<p>and personal contribution, interest, active listening and construction of positive relationships with members of the group, ability to defend their attitudes).</p> <p><b>Specific competences:</b></p> <p>The student will know surgical anatomy of the organs and regions of the head and neck which are an otorhinolaryngologist's area of interest, and be able to use this knowledge for understanding of the basics of the ENT surgical procedures.</p> <p>The student will know to use the basics of clinical physiology, embryology and histology for explanation of many pathological conditions of the head and neck which are an otorhinolaryngologist's area of interest.</p> <p>The student will perform management at the level required for the work of a doctor in primary practice based on the acquired knowledge about etiopathogenesis, clinical picture, and diagnostics in otorhinolaryngology.</p> <p>The student will be able to use specific instruments and aids for basic diagnostic procedures to determine the state of the organs of the head and neck dealing with otorhinolaryngology.</p> <p>Based on the above acquired knowledge and skills, the students will be able to carry out the transfer of knowledge, prevention and treatment of diseases in areas of otorhinolaryngology at the level of primary practice.</p> <p>The students will acquire knowledge of all urgent conditions and the ability of giving first aid in part of urgent conditions, and in particular in the cases with diseases and injuries in the crossing area of the respiratory and digestive tract.</p> <p>Learning outcomes will be evaluated during discussions in seminars, work with patients at the Department, through colloquium ( assessment of knowledge and skills adopted in the practicals) by written test relating to the ENT propedeutics and by independent performance of ENT clinical skills and interpretation of patients findings (radiologic, laboratory, pathohistological), and through final exam</p>			
<b>Syllabus/Course content (in brief):</b>	<p>The course is comprised of the lectures, seminars and special clinical practicals which help the student to acquire knowledge, skills and attitudes which enable him/her to perform basic education of patients and prevention, diagnostics and medical and surgical treatment of otorhinolaryngological diseases at the level of primary practice.</p>			
<b>Type of instruction (mark in bold)</b>	<b>Lectures</b>	<b>Special clinical practicals</b>	<b>Seminars</b>	<b>Independent assignments</b>
	<b>Consultations</b>	Work with mentor	Field work	Other
	<p>Remarks: Classes begin with lectures, followed by seminars and end with special clinical practicals. At seminars, the student presents a presentation on a topic or problem from a certain area for which he was assigned the first day of classes. At special clinical practicals, the student learns about the instruments and devices used to diagnose and treat diseases that are in the domain of the course. The students first learn how to use these tools on each other, and afterwards use them to examine the patients. In</p>			

	practices and offices of the Polyclinic and hospital infirmaries, the student assist the specialist or independently performs diagnostic procedures or therapeutic interventions with the supervision and assistance from the specialist. In operating rooms, the students is acquainted with materials, instruments, devices and procedures that are specific to otorhinolaryngology. The students monitor and assist on operations of the head and neck, work independently on primary treatment of less regular wounds with specialist supervision.			
<b>Student responsibilities</b>	Attendance and active participation in the teaching process; seminars; practical work with patients in practices, offices, infirmaries and operating rooms; preliminary exam; final exam. The students will be screened and evaluated on the basis of: <ul style="list-style-type: none"><li>• Active participation in seminars and special clinical practicals,</li><li>• Topic or problem presentation in seminars,</li><li>• Analysis of teaching texts, developing their own critical thinking about the material and the way of presenting and defending their attitude,</li><li>• Cooperation in small groups on practical work in treatment of patients and patient materials during classes,</li><li>• Student’s knowledge on practical, written and oral of the final exam.</li></ul>			
<b>Screening and evaluation of students (mark in bold)</b>	<b>Class attendance</b>	<b>Class participation</b>	<b>Seminar work</b>	<b>Practical work</b>
	<b>Colloquium - Practical exam</b>	<b>Final exam</b>	Continuous assessment	Essay
<b>Detailed evaluation within the European Credit Transfer System</b>				
<b>OTORHINOLARYNGOLOGY – HEAD AND NECK SURGERY (7 ECTS)</b>				
<b>STUDENT RESPONSIBILITES</b>	<b>HOURS (ESTIMATE)</b>	<b>SHARE IN ECTS</b>	<b>SHARE IN GRADE</b>	
Class attendance and participation	75	3.0	0%	
Seminar work	10	0.25	0%	
Colloquium - Practical exam (independent performance of clinical skills + written exam from ENT propedeutics)	15	0.50	0%	
Final exam	100	3.25	100%	
Students who regularly attended the classes can take the exam. Absence from practicals must be compensated. Student missing more than 20% of practicals will have to work at the ENT Polyclinic of Department of Otorhinolaryngology and Maxillofacial Surgery of University Hospital in Mostar and approach an exam with a certificate of attendance signed by an ENT specialist.				

**Exam from Otorhinolaryngology-head and neck surgery** consists of a colloquium - practical exam and final exam:

- A)** Colloquium - assessment of knowledge and skills adopted in the practicals – a) Written test relating to the ENT propedeutics (examination methods, analysis of patient findings, postoperative care after ENT surgical procedures), b) Independent performance of ENT clinical skills and interpretation of patients findings (radiologic, laboratory, pathohistological). Regular attendance on practicals (minimum 80%) and passing the practical part of the exam are conditions to take the final exam. A record in a student dossier is: passed/not passed. The practical part of the exam is recognized during the current academic year.
- B)** 1. Final exam (1<sup>st</sup> term exam) is in the form of written test (54 questions, multiple choices, one correct answer)

GRADE	CORRECT ANSWERS
excellent (5 - A)	49 - 54
very good (4 - B)	43 - 48
good (3 - C)	37 - 42
sufficient (2 - D)	30 - 36
insufficient (1 - F)	≤ 29

2. Final exam - Resit (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> term exam) is in the form of oral exam (a list containing 107 examination questions is available at the course website).

<b>Required literature:</b>	<p><b>Lit1.</b> Becker W, Naumann HH, Pfaltz CR, Behrbohm H. Ear, nose, and throat diseases with head and neck surgery. 3<sup>rd</sup> edition. Stuttgart, New York: Thieme, 2009.</p> <p><b>Lit2.</b> Jelavić B, Leventić M. Clinical skills in otorhinolaryngology and head and neck surgery for medical students. Mostar, 2023.</p>
<b>Additional literature:</b>	<p><b>Lit3.</b> Scholes MA, Ramakrishnan VR. ENT Secrets, 4<sup>th</sup> edition. Philadelphia: Elsevier, 2016.</p> <p><b>Lit4.</b> ESCMID Sore Throat Guideline Group, Pelucchi C, Grigoryan L, Galeone C, et al. Guideline for the management of acute sore throat. Clin Microbiol Infect. 2012; Suppl 1:1-28.</p> <p><b>Lit5.</b> Thomas M, Yawn BP, Price D, Lund V, Mullol J, Fokkens W; European Position Paper on Rhinosinusitis and Nasal Polyps Group. EPOS Primary Care Guidelines: European Position Paper on the Primary Care Diagnosis and Management of Rhinosinusitis and Nasal Polyps 2007 - a summary. Prim Care Respir J. 2008;17:79-89.</p> <p><b>Lit6.</b> Brožek JL, Bousquet J, Agache I, Agarwal A, Bachert C, Bosnic-Anticevich S, et al. Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines-2016 revision. J Allergy Clin Immunol. 2017;140:950-8.</p> <p>Presentations of lectures are available to students. Video presentations of skills performed on education medical models are available to students at the course website.</p>

<b>Additional information about the course</b>	<p>Methods of monitoring the quality of the teaching process:</p> <p>Student survey (survey of the Medical School Mostar and survey of the Department of Diseases of the Head and Neck)</p> <p>Student-teacher quality control report</p> <p>Exam pass rates and results</p> <p>Teaching quality office report</p> <p>Self-evaluation and external evaluation (visits of quality control teams)</p>

## TEACHING TOPICS

Number and identification of teaching unit (L-lecture, S-seminary, P-practicals):	TOPICS AND LITERATURE
<b>ENT- L1</b>	Title: Introduction to ENT & Head and neck surgery. A brief anatomy of the ear. Literature: Lit1
<b>ENT – L2</b>	Title: Physiology of hearing. Assessment of hearing. Literature: Lit1
<b>ENT – L3</b>	Title: Hearing impairment. Tinnitus. Literature: Lit1
<b>ENT – L4</b>	Title: Physiology of vestibular system. Assessment of vestibular system. Vestibular disorders. Literature: Lit1
<b>ENT – L5</b>	Title: Meniere's disease. Vestibular neuronitis. Ear barotrauma. Literature: Lit1
<b>ENT – L6</b>	Title: Inflammation of external ear. Inflammation of middle ear. Inflammation of inner ear. Literature: Lit1
<b>ENT – L7</b>	Title: Complications of otitis. Tumors of the ear and temporal bonei. Literature: Lit1
<b>ENT – L8</b>	Title: Ear surgery. Cochlear implants. Literature: Lit1
<b>ENT – L9</b>	Title: Nose and paranasal sinusesi: applied embriology, anatomy, physiology. Deformations of the nasal septum and pyramid. Septoplasty, rinoplasty. Literature: Lit1
<b>ENT – L10</b>	Title: Methods of assessment of the nose and paranasal sinuses. Radiologic assessment of the nose and paranasal sinuses. Cutaneous lesions of the external nose; surgical treatment. Tumors of the nasal cavity, paranasal sinuses end nasopharynx. Literature: Lit1
<b>ENT – L11</b>	Title: Injuries of the nose. Foreign bodies in the nose. Inflammation of nasal skin. Literature: Lit1
<b>ENT – L12</b>	Title: Epistaxis. Infectious rhinitis. Non infectious rhinitis. Literature: Lit1, Lit5
<b>ENT – L13</b>	Title: Acute rhinosinusitis. Chronic rhinosinusitis. Nasal polypi. Antrochoanal polyp. Literature: Lit1, Lit4
<b>ENT – L14</b>	Title: A brief anatomy of the pharynx. Tonsillar problem. Adenoids. Literature: Lit1
<b>ENT – L15</b>	Title: Adenotomy, tonsillectomy: indications, basic principles of surgery. Literature: Lit1
<b>ENT – L16</b>	Title: Acute and chronic inflammation of the pharynx and larynx. Literature: Lit1
<b>ENT – L17</b>	Title: Benign and malignant tumors of the pharynx. Benign tumors of the larynx.

	Literature: Lit1
<b>ENT – L18</b>	Title: Diseases of major salivary glands (sialoadenitis, sialolithiasis, tumors). Basic principles of surgical treatment.
	Literature: Lit1
<b>ENT – L19</b>	Title: The crossing of the respiratory and the digestive tracts. Benign lesions of the vocal cords. Vocal cord paralysis. Injuries and stenosis of the larynx.
	Literature: Lit1
<b>ENT – L20</b>	Title: Laryngopharyngeal reflux. Foreign body in the larynx and trachea. Foreign body in the bronchus and oesophagus.
	Literature: Lit1
<b>ENT – L21</b>	Title: Malignant tumors of hypopharynx and larynx. Basic principles of surgical treatment. Neck dissections. Voice rehabilitation following total laryngectomy.
	Literature: Lit1
<b>ENT – L22</b>	Title: A neck lump. Neck cyst. Head and neck lymphoma. Head and neck hemangioma.
	Literature: Lit1
<b>ENT – L23</b>	Title: Deep neck space infections. Metastatic neck tumors of unknown primary origin.
	Literature: Lit1
<b>ENT – L24</b>	Title: Surgery of the thyroid gland.
	Literature: Lit1
<b>ENT – L25</b>	Title: Surgery of the parathyroid gland.
	Literature: Lit1
<b>ENT – S1</b>	Title: Early detection of profound hearing loss and deafness.
	Literature: Lit1
<b>ENT – S2</b>	Title: Emergency conditions in rhinology..
	Literature: Lit1, Lit2
<b>ENT – S3</b>	Title: 1. EP3OS- European Position Paper on the Primary Care Diagnosis and Management of Rhinosinusitis and Nasal Polyps. 2. ARIA guidelines.
	Literature: Lit5, Lit6
<b>ENT – S4</b>	Title: Inspiratory stridor: differential diagnosis, treatment. Coniotomy, tracheostomy.
	Literature: Lit1
<b>ENT – S5</b>	Title: The European Society for Clinical Microbiology and Infectious Diseases: Guideline for the management of acute sore throat
	Literature: Lit4
<b>ENT – S6</b>	Title: Hemorrhage in otorhinolaryngology.
	Literature: Lit1
<b>ENT – S7</b>	Title: Foreign bodies in otorhinolaryngology..
	Literature: Lit1
<b>ENT – S8</b>	Title: Endoscopy in otorhinolaryngology. Surgical treatment of snoring.
	Literature: Lit1
<b>ENT – S9</b>	Title: Division of the Neck into Levels and Sublevels (according to Memorial Sloan-Kettering Cancer Center).
	Literature: Lit1, Lit2
<b>ENT – S10</b>	Title: Esthetic surgery in otorhinolaryngology: auriculoplasty, rhytidectomy, blepharoplasty.
	Literature: Lit1
<b>ENT – P1</b>	Title: ENT working place. Use of a head mirror and head light..
	Literature: Lit1, Lit2
<b>ENT – P2</b>	Title: Instruments for head and neck examination.
	Literature: Lit1, Lit2
<b>ENT – P3</b>	Title: Otoscopy. Ear toilet procedure.
	Literature: Lit1, Lit2
<b>ENT – P4</b>	Title: Anterior rhinoscopy.
	Literature: Lit1, Lit2
<b>ENT – P5</b>	Title: Posterior rhinoscopy. Epistaxis: instruments and materials for anterior and posterior nasal packing.
	Literature: Lit1, Lit2
<b>ENT – P6</b>	Title: Oropharyngoscopy.
	Literature: Lit1, Lit2
<b>ENT – P7</b>	Title: Indirect laryngoscopy procedure.
	Literature: Lit1, Lit2
<b>ENT – P8</b>	Title: Anamnesis in otology, work in the ENT office. (2 hours)

	Literature: Lit1, Lit2
<b>ENT – P9</b>	Title: Anamnesis in rhinology, work in he ENT office. (2 hours)
	Literature: Lit1, Lit2
<b>ENT – P10</b>	Title: Anamnesis in pharyngology, work in he ENT office. (2 hours)
	Literature: Lit1, Lit2
<b>ENT – P11</b>	Title: Anamnesis in laryngology, work in he ENT office. (2 hours)
	Literature: Lit1, Lit2
<b>ENT – P12</b>	Title: Acumetry. Hearing aids. Legal rights of hearing-impaired patients.
	Literature: Lit1, Lit2
<b>ENT – P13</b>	Title: Audiology Unit. Pure tone audiometry. Tympanometry. Early detection of deafness.
	Literature: Lit1, Lit2
<b>ENT – P14</b>	Title: Vestibulology Unit. Vestibulometry (caloric test, rotational test).
	Literature: Lit1, Lit2
<b>ENT – P15</b>	Title: Unit for ENT endoscopy. Rigid and flexible endoscopes in ENT. Otomicroscopy.
	Literature: Lit1, Lit2
<b>ENT – P16</b>	Title: Work in the ENT ward and Wound Care Unit. (9 hours)
	Literature: Lit1, Lit2
<b>ENT – P17</b>	Title: Tracheal cannula: types, toilet, change. Care of patient with tracheostomy tube.
	Literature: Lit1, Lit2
<b>ENT – P18</b>	Title: Imaging in ENT: Ultrasound, X-rays, CT, MRI. A presentation of normal and pathologic radiologic findings.
	Literature: Lit1, Lit2
<b>ENT – P19</b>	Title: Specificities of the ENT operating theater. Equipment for microlaryngoscopy, rigid oesophagoscopy, and tracheobronchoscopy. Work in the ENT operating theater. (5 hours)
	Literature: Lit1, Lit2
<b>ENT – P20</b>	Title: Practical skills in ENT: student performs examination by itself. (5 hours)
	Literature: Lit1, Lit2