

Faculty of Medicine in Rijeka

Course: Otorhinolaryngology

Course Coordinator: Assistant Professor Marko Velepič, MD, PhD

Department: Department of Otorhinolaryngology

Study: Integrated undergraduate and graduate university study of Medicine in English

Year of the study: fifth

Academic year: 2021/2022

COURSE SYLLABUS

Course information (basic description, general information, teaching overview, required equipment, and preparation, etc.):

Otorhinolaryngology is a mandatory course in the fifth year of the Integrated undergraduate and graduate university study of Medicine in English. It consists of 30 hours of lecture classes, 15 hours of seminar classes, and 30 hours of practical classes, which is a total of 75 hours (**4.5 ECTS**). Classes are held at the Clinic for Otorhinolaryngology and Head and Neck Surgery of the Clinical Hospital Center in Rijeka.

The aim of the course is to acquire basic knowledge in the field of otorhinolaryngology and to familiarize the students with the ENT doctor's field of work; disease diagnostics, medicamentous and surgical treatment. Special emphasis is placed on training students to perform examinations of the patient's head and neck and solving the most common and urgent ENT pathologies. The objective is to familiarize the students with the organization in the operating room, wards, and the polyclinic.

Course content

An overview of the ENT and head and neck surgery field of work. Diagnostics and treatment of otological, rhinological, pharyngolaryngological disorders and pathology of the neck, with a special reference to emergencies in ENT.

Class performance

Classes are performed through lectures, seminars, and practicals. The estimated duration of classes is five weeks. During practical classes, the teacher monitors student participation during their examination and treatment of patients. Teachers discuss with students the specific pathological conditions of individual patients at the clinic.

During classes, student active participation and acquired knowledge will be assessed through oral examinations during seminars and practicals, oral colloquium, and oral final exam.

Required reading:

1. Braut T., Velepich M., Kujundzic M., Marijic B., Marzic D., Ostarijas E.: Emergencies in ENT – e-teaching material. Sveučilište u Rijeci, Medicinski fakultet, Rijeka, 2021.
2. Cummings Otolaryngology: Head and Neck Surgery, e-teaching material available at *Clinical Key* base, enabled by the Faculty of Medicine's Library.

Recommended for additional reading:

1. Johnson JT, Rosen CA, Bailey BJ. Bailey's head and neck surgery – otolaryngology. Wolters Kluwer Health/Lippincott Williams & Wilkins, Philadelphia, 2014.
2. Additional e-teaching material available at *Access Medicine* and *Clinical Key* bases (e.g. Cummings Pediatric Otolaryngology, ENT guidelines, etc.)

Course teaching plan

List of lectures (with titles and learning outcomes):

L1, L2 Introduction to ENT; ENT anatomy and physiology

Learning outcomes:

To discover the ENT and head and neck surgery field of work.

To recall previous knowledge of anatomy and physiology of the ENT region.

To describe the connection between embryological, anatomical, and physiological units with possible pathological phenomena.

L 3, L 4 Emergencies in ENT

Learning outcomes:

To identify emergencies in ENT.

To describe the symptomatology of basic emergencies in ENT.

To define the basics of clinical examination for recognition and differential diagnostics of emergencies in ENT.

To identify the basic causes of inspiratory stridor and to describe treatment options for respiratory distress (conicotomy/tracheotomy).

To describe the management of other emergencies in the ENT region.

L5, L6 Infections in ENT

Learning outcomes:

To name inflammatory and infectious diseases in the field of otorhinolaryngology.

To describe the etiology, clinical manifestations, propagation of inflammatory processes, and complications in deep neck spaces and, consequently, to define diagnostic procedures and treatment options.

L7, L8 Rhinological allergology

Learning outcomes:

To describe allergic rhinitis (medical history, clinical manifestations, diagnostic methods, and therapy).

To identify hyperreactive rhinopathy and drug-induced rhinitis.

L9, L10 Rhinological disorders in everyday practice; Epistaxis

Learning outcomes:

To list symptoms of rhinological disorders and to explain the range of diagnostic procedures (anterior and posterior rhinoscopy, endoscopy of the nose and sinuses, rhinomanometry, olfactometry) and basic treatment methods.

To name the basic causes of epistaxis and methods of stopping nosebleeds.

To describe the treatment of patients with epistaxis.

L11, L12 Aesthetic surgery; Surgical treatment of skin tumors

Learning outcomes:

To describe aesthetic and reconstructive procedures of the head and neck.

To explain the treatment of skin tumors.

L13, L14 Benign and malignant tumors of the larynx

Learning outcomes:

To identify risk factors for the development of benign and malignant laryngeal disorders.

To classify laryngeal disorders, to describe their clinical presentation, TNM classification and basic diagnostic methods.

L15 Metastatic neck disease;

Learning outcomes:

To describe the diagnosis of local and distant malignant neck metastases and their treatment.

L 16 Laryngeal surgery

Learning outcomes:

To describe different types of laryngeal surgical procedures (sparing and radical).

L17 Non-surgical aesthetic medicine

Learning outcomes:

To recognize non-surgical aesthetic procedures like botulinum toxin and fillers.

L18, L19 Outer and middle ear disorders

Learning outcomes:

To describe the etiology of acute outer and middle ear inflammations, the connection of otitis media with upper respiratory tract disorders and pharyngeal obstruction (enlarged tonsils), Eustachian tube dysfunction (cleft palate), etc.

To list symptoms of acute outer and middle ear inflammations (anamnestic, otoscopic).

To describe prevention and treatment of acute outer and middle ear inflammations.

L 20 Otogenic complications

Learning outcomes:

To describe the complications of ear infections (intratemporal, intracranial, cervical, systemic).

To recognize their symptoms and signs and to describe treatment methods.

L21 Causes and diagnosis of deafness and vertigo

Learning outcomes:

To identify different causes and types of hearing impairment and dizziness.
To describe their diagnosis and pharmacological and surgical therapy.

L22 Anatomical anomalies and other selected chapters on pediatric ENT

Learning outcomes:

To describe the basic anomalies of the ENT region and their treatment options.
To differentiate clinical features of relevant ENT pathological conditions between children and adults, as well as the specific pathology of the ENT region depending on the developmental age.

L23 Voice and speech rehabilitation

Learning outcomes:

To identify laryngectomy club.
To describe voice rehabilitation and laryngectomy.
To describe prostheses and speech cannulas.

L24 Modern otosurgery; Implantable hearing aids; Cochlear implants;

Learning outcomes:

To list types of otoscopic procedures.
To define modern otosurgery.
To describe postoperative patient monitoring.
To name implantable hearing aids and to define the indications for prescribing them.
To recognize indications for cochlear implantation.

L25

Selected chapters on the inner ear

Learning outcomes:

To list symptoms of inner ear disorders and the basics of their treatment.

L26, L27 Thyroid gland tumors

Learning outcomes:

To describe the course of the disease and the prognosis in different histological types of benign and malignant thyroid tumors.
To describe the surgical treatment of thyroid glands.

L28, L29 Pharyngeal tissue; Tonsillar disorders; Pharyngeal neoplasms

Learning outcomes:

To define tonsillar disorders and the Waldeyer's ring.
To define indications for tonsillectomy – history-taking, swabs, AST-O, peritonsillar abscess.
To define indications for adenotomy.
To list various causes of pharyngeal disorders and pharyngeal tumors and to describe diagnostic procedures and treatment options.

L30 Functional endoscopic sinus surgery

Learning outcomes:

To define modern sinus surgery.

To list types of endoscopic procedures and to describe postoperative patient monitoring.

To recognize indications for functional endoscopic surgery.

List of seminars (with titles and learning outcomes):

S1, S2 Introduction to ENT; ENT anatomy and physiology

To discuss the field of ENT and head and neck surgery.

To recall the basics of head and neck anatomy and physiology and their connection with the symptomatology and pathology of the ENT region.

S3, 4 Emergencies in ENT; Rhinological allergology

To discuss ENT emergencies.

To distinguish the basic clinical signs and the basics of clinical examination for their recognition and differential diagnostics.

To describe the management of ENT emergencies.

To discuss the symptomatology, diagnosis, and treatment methods in rhinological allergology

S5, S6 Outer and middle ear disorders

To describe the etiology and symptomatology of acute outer and middle ear inflammations.

To explain prevention and treatment of acute outer and middle ear inflammations.

S7,8 Pediatric ENT and anatomical anomalies; Otogenic complications; Implantable hearing aids

To explain the differences in clinical features of relevant pathological ENT conditions between children and adults, as well as the specific pathology of the ENT region depending on the developmental age.

To illustrate the basics of anatomical anomalies in the ENT region.

S9 Plastic and reconstructive procedures in ENT

To discuss the possibilities of basic reconstructive and plastic surgery in the ENT region.

S10, 11 Pharyngeal lymphatic tissue and tonsillar disorders; Pharyngeal neoplasms

To illustrate the physiology and pathophysiology of Waldeyer's ring and to discuss indications for adenotomy, tonsilloadenoidectomy and tonsillectomy.

To discuss the basics of symptomatology and to describe the diagnosis and treatment methods for the most common pharyngeal neoplasms.

S12 Surgery of thyroid and parathyroid tumors

To distinguish different histological types of benign and malignant thyroid tumors and to discuss protocols for surgical treatment of thyroid and parathyroid glands.

S13 First aid on laryngectomees

To explain the necessity of everyday help to patients with laryngectomy. To know how to perform first aid to a laryngectomized.

S 14 Laryngeal tumor – from diagnosis to treatment

To discuss the diagnosis and oncological and surgical treatment of various benign and malignant laryngeal disorders and to explain the importance of patient follow-up.

S15 Sleep apnea

To describe sleep apnea and its main symptoms.

To discuss diagnostic procedures and treatment options for sleep apnea.

List of practicals (with titles and learning outcomes):

Practical classes from the course Otorhinolaryngology are held at the Clinic for Otorhinolaryngology and Head and Neck Surgery of the Clinical Hospital Center in Rijeka. Students get acquainted with ENT pathology and basic patient examination in the presence of an assistant, using a headlight, otomicroscope, and endoscope. Students discuss differential diagnostics and treatment options for patients in the outpatient department, patients at the clinic scheduled for surgical treatment, and patients treated at the Department of Audiology and Phoniatics. Students follow their mentors on a hospital round and participate in the patient treatment at the clinic and postoperative follow-up. They are introduced to the organization at the polyclinic, subspecialist clinics, and at the Department of Audiology and Phoniatics, where they will learn about the daily work of an ENT doctor, especially in solving urgent and more frequent pathologies.

Student obligations:

Students are obligated to regularly attend and actively participate in all forms of classes.

Exam (exam taking, detailed exam description of the oral/written/practical part, point distribution, grading criteria):

Student grading is conducted according to the current **Ordinance on Studies of the University of Rijeka** and the **Ordinance on Student Assessment and Evaluation at the Faculty of Medicine in Rijeka**.

Student work will be assessed and evaluated during course classes and on the final exam.

Students can obtain **50 grade points** during classes and **50 grade points** on the final exam, which totals **100 grade points**. Students are evaluated according to the ECTS (A–F) and numerical systems (1–5). Evaluation according to the ECTS system is conducted according to the absolute redistribution.

Out of the maximum of 50 grade points possible to obtain during classes, the student must obtain at least 25 grade points to access the final exam. Students who obtain less than 25 grade points during classes (F grade), must re-enroll the course.

Grade points can be obtained by active participation during classes and by performing the assignments as follows:

I. Evaluation during classes (maximum of 50 grade points):

- a) class attendance (up to 25 grade points)
- b) participation in practicals (up to 25 grade points)

a) Class attendance (up to 25 grade points)

Students can be absent from 30% of classes provided they have a justifiable cause, i.e., a doctor's note. Attending lectures, seminars, and practicals is mandatory. Compensation of practicals is possible with a prior agreement with the course coordinator. If a student is absent from more than 30% of classes, whether it is justifiable or not, they cannot continue to participate in the course and cannot access the final exam. In that case, the student is graded with 0 ECTS credits and an F grade.

Grading **class attendance at practicals** will be performed as follows:

% of attendance	grade points
85–100%	15
75–84%	10
< 74%	5

Grading **class attendance at seminars** will be performed as follows:

% of attendance	grade points
94–100%	5
87–93%	4
80–86%	3
< 80%	2

Grading **class attendance at lectures** will be performed as follows:

% of attendance	grade points
90–100%	5
< 90%	3

b) Participation in practicals (up to 25 grade points)

Practical knowledge of all students will be evaluated during classes, for which they can obtain a maximum of 25 grade points (13–25). The examination is performed during practicals.

During the examination, **the course coordinator evaluates each student's acquired knowledge and skills during their ENT patient examination**. Grades are assigned as follows:

grade	grade points
excellent	25
very good	21
good	17

sufficient

15

II. Final exam (maximum of 50 grade points):

Who can access the final exam

Students who **obtained at least 25 grade points** during classes are obligated to access the final exam on which they can obtain a maximum of 50 grade points.

Who cannot access the final exam

Students who **obtained less than 25 grade points and/or were absent from more than 30% of classes** cannot access the final exam and have to re-enroll the course next year.

The final exam consists of an oral examination. A maximum of 50 grade points can be obtained at the final exam (25–50).

Success at the final exam is converted into grade points as follows:

grade	grade points
excellent	50
very good	42
good	33
sufficient	25
insufficient	0

In order to pass the final exam and final evaluation (including the previously obtained grade points during classes), the student must be positively evaluated and obtain at least 25 grade points on the final exam.

Grading in the ECTS system is performed according to the absolute grading system, i.e., based on the final success:

A – 90–100%
B – 75–89,9%
C – 60–74,9%
D – 50–59,9%
F – 0–49,9%

Grades in the ECTS system are converted into numerical grades as follows:

A = excellent (5)
B = very good (4)
C = good (3)
D = sufficient (2)
F = insufficient (1)

Other information important for students regarding the course:

Teaching content, exam dates, and all information regarding the course can be found on the website of the Department of Otorhinolaryngology.

**SCHEDULE for the academic year 2021/2022
(12 January 2021–19 February 2021)**

DATE	TIME	TOPIC/GROUPS	LOCATION	LECTURERS
11/1/2021 Tuesday	13,15-14,45	L1, L2 Uvod	FoM Lecture room 2	Braut, Braut
12/1/2021 Wednesday	12,30-14,00	L 3, L4	FoM Lecture room 2	Braut, Braut
	15,00-16,30	L 5, L 6	on line	Skitarelić
13/1/2021 Thursday	12,30-14,00	L 7, L 8	FoM Lecture room 2	Braut, Braut
14/1/2021 Friday	12,30-14,00	L 9, L 10	FoM Lecture room 2	Braut, Braut
17/1/2021 Monday	12,30-14,00	L 11, L 12	Large lecture room at the CHC	Manestar
19/1/2021 Wednesday	08,00-11,00	L 13, L14, L 15, L 16	Large lecture room at the CHC	Vukelić
	11,30-12,15	L 17	Large lecture room at the CHC	Manestar
	13,00-14,30	L 18, L 19	Large lecture room at the CHC	Velepič
24/1/2021 Monday	13:15– 14:45	P 1, 2 /1,2/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
25/1/2021 Tuesday	8:00–10:15	L20, L21, L 22	FoM Lecture room 2	Velepič, Velepič, Velepič
	10:30-12:45	L 23 L24, L 25	FoM Lecture room 2	Vukelić Velepič, Velepič

	13:15–14:45	P1,2 /5/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
26/1/2021 Wednesday	13:15–14:45	P 1,2 /3, 4/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
27/1/2021 Thursday	8:15–9:45	L 26 L 27	Large lecture room at the CHC	Vukelić, Vukelić
	10:00-11:30	L 28, L 29	Large lecture room at the CHC	Manestar
	12:00-12:45	L 30	FoM Lecture room 2	Braut
	13:00-14:30	S 1, S2	FoM Lecture room 2	Braut, Braut

DATE	TIME	TOPIC/GROUPS	LOCATION	LECTURERS
28/1/2021 Friday	13:00–14:30	S 3, S 4	FoM Lecture room 2	Braut, Braut
31/1/2021 Monday	13:15-14:45	P3, P4 /1, 2/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
1/2/2021 Tuesday	8:15–9:45	S 5, S6	Large lecture room at the CHC	Velepich, Velepich
	10:00-11:30	S 7, S 8	Large lecture room at the CHC	Velepich, Velepich
	11:45-12:30	S 9	Large lecture room at the CHC	Manestar
	13:15-14:45	P 3,4 /5/	ENT clinic	Maržić, Malvić, Marijić,

				Mačkić, Vrebac, Maršić, Tudor
2/2/2021 Wednesday	13:15-14:45	S 10, S 11	FoM Lecture room 2	Manestar
3/2/2021 Thursday	8:30–10:45	S 12, S13, S 14	FoM Lecture room 2	Vukelić
	11:00-11:45	S 15	FoM Lecture room 2	Manestar
	11:30-14:00	P 5,6 /1,2/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
7/2/2021 Monday	8:00–15:15	P 7-14 /1,2/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
8/2/2021 Tuesday	8:00–15:15	P5-12 /5/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
9/2/2021 Wednesday	8:00–15:15	P 5-12 /3,4/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
10/2/2021 Thursday	8:00–15:15	P 15-22 /1,2/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor

DATE	TIME	TOPIC/GROUPS	LOCATION	LECTURERS
11/2/2021 Friday	8:00–15:15	P 13-20 /5/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
14/2/2021 Monday	8:00–15:15	P 13-20 /3,4/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
15/2/2021 Tuesday	8:00–15:15	P 23-30 /1,2/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor

16/2/2021 Wednesday	8:00–15:15	P 21-28 /5/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
17/2/2021 Thursday	08:00-15:15	P 21-28 /3,4/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
18/2/2021 Friday	08:45-10:15	P 29-30 /5/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
	10:45-12:15	P 29-30 /3,4/	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor
	12:15-15:00	Compenstation of practicals	ENT clinic	Maržić, Malvić, Marijić, Mačkić, Vrebac, Maršić, Tudor

List of lectures, seminars, and practicals:

	LECTURES (topics)	Teaching hours	Place
L1–2	Introduction to ENT ENT anatomy and physiology	2	Faculty of Medicine Braut
L3–4	Emergencies in ENT	2	Faculty of Medicine Braut
L5–6	Infections in ENT	2	On line Skitarelić
L7–8	Rhinological allergology	2	Faculty of Medicine Braut
L9-10	Rhinological disorders in everyday practice Epistaxis	2	Faculty of Medicine Braut
L11–12	Aesthetic surgery Surgical treatment of skin tumors	2	Large lecture room at the CHC Manestar
L13-14 L 15-16	Benign anf malignant laryngeal disorders Metastatic neck disease, Laryngeal surgery	4	Large lecture room at the CHC Vukelić
L17	Non-surgical aesthetic medicine	1	Large lecture room at the CHC Manestar
L18-19	Outer and middle ear disorders	2	Large lecture room at the CHC Velevič
L20-22	Otogenic complications, Causes and diagnosis of deafness and vertigo, Anatomical anomalies and other selected chapters on pediatric ENT	3	Large lecture room at the CHC Velevič
L23	Voice and speech rehabilitation	1	Faculty of Medicine Vukelić
L 24-25	Modern otosurgery; Cochlear implants; Selected chapters o the inner ear; Implantable hearing aids	2	Large lecture room at the CHC Velevič
L26-27	Thyroid tumors	2	Large lecture room at the CHC Vukelić
L28-29	Pharyngeal tissue; Tonsillar disorders; Pharyngeal neoplasms	2	Large lecture room at the CHC Manestar
L30	Functional endoscopic sinus surgery	1	Faculty of Medicine Braut
	Total number of lecture hours	30	

	SEMINARS (topics)	Teaching hours	Location
S1-2	Introduction to ENT ENT anatomy and physiology	2	FoM Lecture room 2 Braut
S3-4	Emergencies in ENT; Rhinological allergology	2	FoM Lecture room 2 Braut
S5-6	Outer and middle ear disorders	2	Large lecture room at the CHC Velevič
S7-8	Pediatric ENT and anatomical anomalies; Otogenic complications; Implantable hearing aids	2	Large lecture room at the CHC Velevič
S9	Plastic and reconstructive procedures in ENT	1	Large lecture room at the CHC Manestar
S10-11	Pharyngeal lymphatic tissue and tonsillar disorders; Pharyngeal neoplasms	2	FoM Lecture room 2 Manestar
S12-14	Surgery of thyroid and parathyroid tumors; First aid on laryngectomees; Laryngeal tumor-from diagnosis to treatment	3	FoM Lecture room 2 Vukelić
S15	Sleep apnea	1	FoM Lecture room 2 Manestar
	Total number of seminar hours	15	

	PRACTICALS (topics)	Teaching hours	Location
P1–30	<p>ENT practicals are performed at the Clinic for Otorhinolaryngology and Head and Neck Surgery and the Department of Audiology and Phoniatics of the Clinical Hospital Center Rijeka.</p> <p>Students get acquainted with ENT pathology and basic patient examination in the presence of an assistant, using a headlight, otomicroscope, and endoscope. Students discuss differential diagnostics and treatment options for patients in the outpatient department, patients at the clinic scheduled for surgical treatment, and patients treated at the Department of Audiology and Phoniatics. Students follow their mentors on a hospital round and participate in the patient treatment at the clinic and postoperative follow-up. They are introduced to the organization at the polyclinic, subspecialist clinics, and at the Department of Audiology and Phoniatics, where they will learn about the daily work of an ENT doctor, especially in solving urgent and more frequent pathologies.</p>	30	ENT clinic
	Total number of practical hours	30	