


**UČNI NAČRT PREDMETA / COURSE SYLLABUS**

<b>Ime predmeta:</b>	<b>ORL z osnovami maksilofacialne kirurgije</b>
<b>Course title:</b>	<b>Otorhinolaryngology with the basics of maxillofacial surgery</b>

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
Splošna medicina, enovit magistrski študijski program		4	7.
General medicine, Uniform master's degree study program		4th	7th

**Vrsta predmeta (obvezni ali izbirni) /  
Course type (compulsory or elective)**

obvezni  
compulsory

**Univerzitetna koda predmeta / University course code:**

Predavanja Lectures	Seminar Seminar	Vaje Tutorial			Klinične vaje Clinical training	Druge oblike študija Other forms of study	Samost. delo Individual work	ECTS
60	40	AV	LV	RV	40		70	7

**Nosilec predmeta / Course coordinator:**

izr. prof. dr. Janez Rebol

**Jeziki /Languages:**

**Predavanja / Lectures:** slovenski/slovene

**Vaje / Tutorial:** slovenski/slovene

**Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:**

**Prerequisites for enrolling in the course or for performing study obligations:**

**Vsebina (kratek pregled učnega načrta):**

**Uho** (razvoj in kratek pregled anatomije, temeljni fiziologije, slušnega in ravnotežnega aparata), bolezni uhlja (razvojne nepravilnosti, mehanične in termične poškodbe, vnetja, benigni in maligni tumorji), zunanega sluhovoda (razvojne nepravilnosti, tujki, vnetja, benigni in maligni tumorji), srednjega ušesa (razvojne nepravilnosti, poškodbe, vnetja in njihovi zapleti, otoskleroza, pareza in paraliza obraznega živca, benigni in maligni tumorji), notranjega ušesa (razvojne nepravilnosti, poškodbe, vnetja, Menierova bolezen in sindromi, starostna naglušnost, tumorji, gluhost, rehabilitacija naglušnih).

**Content (syllabus outline):**

**Ear:** (development and anatomy, principles of physiology of hearing and equilibrium), diseases of the auricle (congenital abnormalities, mechanical and thermal injuries, inflammation, benign and malignant tumours), external ear canal (congenital abnormalities, foreign bodies, injuries, inflammation, benign and malignant tumours), middle ear (congenital abnormalities, injuries, inflammation and complications, otosclerosis, paresis and paralysis of the facial nerve benign and malignant tumours), inner ear (congenital abnormalities, injuries, inflammation, Meniere's disease and syndromes, presbycusis, tumours, deafness, rehabilitation of deaf patients).

**Nos in obnosne votline:** pregled razvoja in anatomije, temelji fiziologije, bolezni nosu in obnosnih votlin (prirojene nepravilnosti, poškodbe, tujki, krvavitve nosu, vnetja in njihovi zapleti, motnje voja, benigni in maligni tumorji).

**Žrelo in požiralnik:** pregled razvoja in anatomije, temelji fiziologije, bolezni žrela in požiralnika (prirojene nepravilnosti, poškodbe, tujki, vnetja in njihovi zapleti, parestezije žrela, divertikli, benigni in maligni tumorji).

**Grlo in sapnik:** pregled razvoja in anatomije, temelji fiziologije, bolezni grla in sapnika (prirojene nepravilnosti, poškodbe in njihove posledice, tujki, vnetja, otekline grla, zamejene hiperplastične spremembe na laringalni sluznici, prekanceroze grla, tumorji grla in sapnika, pareze in paralize laringalnih živcev).

**Vrat:** anatomija, bolezni bezgavk (vnetja, maligni tumorji), prirojene ciste in fistule na vratu.

**Slinavke:** anatomija in fiziologija, bolezni slinavk (vnetja, sialolitiaz, sialoadenoze, benigni in maligni tumorji).

**Motnje glasu in govora:** fonacijske motnje, artikulacijske motnje, motnje govornega ritma, subsimbolične motnje, simbolične motnje, govor duševno zaostalnih, ezofagalni glas in govor.

**Otorinolaringološke preiskave in posegi:** otoskopija, sprednja rinoskopija, orofaringoskopija, indirektna in direktna laringoskopija, mikrolaringoskopija, zadajšnja rinoskopija, slušne preiskave, preiskave ravnotežnega aparata, rentgenske preiskave; **posegi:** izpiranje zunanjega sluhovoda, prepričevanje ušesne troblje, paracenteza, odstarnjevanje tujka iz zunanjega sluhovoda in iz nosu, ustavitev krvavitve iz nosu, izpiranje nosu, punkcija čeljustne votline, incizija peritonzilarnega abscesa, treheotomija in konikotomija, orotrahealna intubacija, nega traheostome.

**Maksilofacialna kirurgija z osnovami stomatologije:**

1. Odontogena vnetja
2. Poškodbe maksilofacialnega področja
3. Tumorji
4. Prirojene anomalije
5. Disgnatije
6. Bolezni čeljust. sklepa in obrazna bolečina
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9. Čeljustna in zobna ortopedija (splošni pregled)
10. Zobne bolezni (splošni pregled)
11. Ustne bolezni in parodontologija
12. Fiksna protetika in snemna protetika (splošni pregled)
13. Implantologija

**Nose and paranasal sinuses:** development and anatomy, principles of physiology, diseases of the nose and paranasal sinuses (congenital abnormalities, injuries, foreign bodies, epistaxis, inflammation and complications, smell disorders, benign and malignant tumours).

**Pharynx and oesophagus:** development and anatomy, principles of physiology, diseases of the pharynx and oesophagus (congenital abnormalities, injuries, foreign bodies, inflammation and complications, paresthesias, diverticles, benign and malignant tumours).

**Larynx and trachea:** development and anatomy, principles of physiology, diseases of the larynx and trachea (congenital abnormalities, injuries, foreign bodies, inflammation and complications, hyperplastic changes of laryngeal mucosa, precanceroses, benign and malignant tumours, paresis and paralysis of the vocal cords).

**Neck:** anatomy, lymph node diseases (inflammation, malignant tumours), congenital cysts and neck fistulas.

**Salivary glands:** anatomy and physiology, salivary gland diseases (inflammation, sialolithiasis, sialoadenosis, benign and malignant tumours).

**Speech and voice disorders:** phonation disorders, articulation disorders, speech rhythm disorders, subsymbolic disorders, symbolic disorders, speech of mentally impaired, oesophageal voice and speech.

**Investigations and procedures in otorhinolaryngology:** otoscopy, anterior rhinoscopy, oropharyngoscopy, indirect and direct laryngoscopy, microlaryngoscopy, posterior rhinoscopy, audiologic investigations, vestibular investigations, roentgen investigations; procedures: cerumen removal, eustachian tube ventilation, myringotomy, foreign body removal from the ear canal and nose, treatment of epistaxis, maxillary sinus puncture, quinsy incision, tracheotomy, conicotomy, orotracheal intubation, tracheostomy care.

**Maxillofacial surgery with basic clinical stomatology**

1. Odontogenic inflammations
2. Maxillofacial region injuries
3. Tumors
4. Congenital anomalies
5. Disgnatia
6. Temporomandibular joint diseases and facial pain
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9. Orthodontics - general examination
10. Dental diseases
11. Oral diseases and periodontology
12. Prostodontics - general examination
13. Implantology

## Temeljni literatura in viri / Reading materials:

- Lee KJ. Essential Otolaryngology ( 12e).Mc Graw Hill 2017.
- Probst, Grevers,Iro. Basic othorinolaryngology:a step-by step learning guide.Thime (2e) 2017.
- Rebol J. Otoscopy findings. Springer 2022
- Lukšić I. Maksilofacialna kirurgija – Zagreb Školska knjiga,2019, ISBN 9789533553139

### Priporočeni učbeniki:

- Vinko Kambic, Otorinolaringologija, Ljubljana, Mladinska knjiga, 1984.
- Becker and al. Ear, Nose and Throat Diseases, Thieme Stuttgart 1993.
- Peterson L et al. Contemporary Oral and Maxillofacial Surgery (4th edition),St. Louis, Mosby, cop. 2003. - XVIII, 776 str. COBISS.SI-ID 2612756Open Access Atlas of Otolaryngology, Head & Neck Operative Surgery, ki je na linku: <http://www.entdev.uct.ac.za/guides/open-access-atlas-of-otolaryngology-head-neck-operative-surgery/> .

### Cilji in kompetence:

Otorinolaringologija seznanja bodočega zdravnika s patofiziologijo, kliničnimi znamenji, diagnostiko, zdravljenjem in preprečevanjem bolezni ušes, nosu, žrela in grla. Študenta usposobi za oceno bolezni in določitev, kdaj bo kot zdravnik splošne medicine zdravil bolnika sam in kdaj ga bo poslal k specialistu. V sklopu teoretičnega, predvsem pa praktičnega dela, se študent nauči temeljnih otorinolaringoloških preiskav in enostavnejših oziroma nujnih posegov. Študent se seznanja s tumorji, prirojenimi anomaliji, čeljustno in zobno ortopedijo, netumorski boleznimi žlez slinavk, disgnatijami... Študenta usposobi za oceno bolezni in določitev, kdaj bo kot zdravnik splošne medicine zdravil bolnika sam in kdaj ga bo poslal k specialistu. V sklopu teoretičnega in praktičnega dela, se študent nauči temeljnih stomatoloških in oralno-kirurških preiskav in enostavnejših oziroma nujnih posegov.

### Objectives and competences:

Students get acquainted with patophysiology, clinical signs, investigations, treatment and prevention of ENT diseases. They should be able to asses the disease and decide when to treat the patient by themselves or send him to specialist. During theoretical and especially practical work student learns about fundamental ENT investigations and simple respectively urgent procedures. The student of medicine is introduced to tumors, congenital anomalies, orthodontics, non-tumor diseases of the saliva glands, disgnatia, Student is trained to estimate the disease and to decide whether he/she (as a general practitioner) will treat the patient by himself or direct him to the specialist. Within the theoretical and practical work the student is trained the basic dental and oral surgery examining and emergency interventions

### Predvideni študijski rezultati:

Znanje in razumevanje:

- Poznavanje in zdravljenje pomembnejših otorinolaringoloških bolezni.
- prepoznavanje klinične slike
- uvajanje diagnostičnih preiskav
- diferencialna diagnostična presoja
- pravilno usmerjanje ustreznim stomatološkim vejam za nadaljnjo terapijo

Prenesljive/ključne spretnosti in drugi atributi:

Otorinolaringološka preiskava, osnovni posegi v ORL.

### Intended learning outcomes:

Knowledge and understanding

- Knowledge and treatment of important ENT diseases.
- establishing the clinical status
- introducing diagnostic examinations
- differential diagnostic analysis
- right referral to adequate dentistry branches for further treatment

Transferable/Key Skills and other attributes:

ENT investigation, basic procedures in ENT

**Metode poučevanja in učenja:**

Vaje se izvajajo z učenjem preiskave na študentih in preiskovanjem bolnikov.  
Seminarji- pod vodstvom mentorjev se predstavijo izbrane teme.  
Predavanja s strani predavateljev.

**Learning and teaching methods:**

ENT investigation is learnt on student colleagues and later practiced on patients.  
Seminar- special themes are presented under mentorship.  
Lectures by lecturers.

**Načini ocenjevanja:**

Delež (v %) /  
Share (in %)

**Assessment methods:**

Način (pisni izpit, ustno izpraševanje, naloge, projekt)	Delež (v %) / Share (in %)	Type (examination, oral, coursework, project):
<ul style="list-style-type: none"> <li>• Pisni izpit</li> <li>• opravljen ustni izpit iz ORL in osnov maksilofacialne kirurgije</li> </ul> <p>ŠTUDIJSKE OBVEZNOSTI ŠTUDENTOV: Obvezna 50 % prisotnost na predavanjih je pogoj za pristop k izpitnemu roku.</p> <p>POGOJI ZA PRISTOP K POSAMEZNEMU PREVERJANJU ZNANJA: Opravljene vaje, opravljena konikotomija na živalskem modelu in opravljen PREIZKUS OTORINOLARINGOLOŠKE PREISKAVE PRI IZVAJALCU VAJ IN 1 seminar so pogoj za pristop k pisnemu delu. Pozitiven pisni izpit je pogoj za pristop k ustnemu izpitu.</p> <p>Kriteriji za pisni izpit: 56% - 65% 6 66% - 75% 7 76% - 85% 8 86% - 95% 9 96 – 100% 10</p>	<p><b>50</b></p> <p><b>50</b></p>	<p>• written exam</p> <p>• oral examination in otorhinolaryngology and in the basics of maxillofacial surgery</p> <p>ACADEMIC OBLIGATIONS OF STUDENTS: Obligatory 50% attendance at lectures is a requirement for access to an examination date.</p> <p>REQUIREMENTS FOR ACCESS TO INDIVIDUAL KNOWLEDGE CHECKING: Completed practice, , conicotomy in an animal model and completed testing of otorhinolaryngological examination by the performer of practice and one seminar assignment are requirements for access to the written part. A positive written exam is a requirement for access to an oral exam.</p> <p>Criteria for the written exam: 56% - 65% 6 66% - 75% 7 76% - 85% 8 86% - 95% 9 96% - 100% 10</p>

**Reference nosilca / Course coordinator's references:**

REBOL, Janez, BALON, Peter, KOKOL, Peter, ŠVAGAN, Matija. Distribution of neck metastases and survival in patients with breast carcinoma. *Oncology research and treatment*. 2020, vol. 43, no. 7/8, str. 380-386, ilustr. ISSN 2296-5262.

MOHAN, Tamilselvan, ČAS, Alja, BRAČIČ, Matej, PLOHL, Olivija, VESEL, Alenka, RUPNIK, Maja, FRAS ZEMLIČ, Lidija, REBOL, Janez. Highly protein repellent and antiadhesive polysaccharide biomaterial coating for urinary catheter applications. *ACS biomaterials science & engineering*. 2019, vol. 5, issue 11, str. 5825-5832. ISSN 2373-9878.

AJDNIK, Urban, FRAS ZEMLIČ, Lidija, BRAČIČ, Matej, MAVER, Uroš, PLOHL, Olivija, REBOL, Janez. Functionalisation of silicone by drug-embedded chitosan nanoparticles for potential applications in otorhinolaryngology. *Materials*. 2019, vol. 12, iss. 6, str. 1-20, ilustr. ISSN 1996-1944.

ŠVAGAN, Matija, POVALEJ BRŽAN, Petra, REBOL, Janez. Comparison of satisfaction between patients using percutaneous and transcutaneous bone conduction devices. *Otology & neurotology*. Jun. 2019, vol. 40, iss. 5, str. 651-657, ilustr. ISSN 1537-4505.