

UČNI NAČRT PREDMETA / COURSE SYLLABUS						
Predmet:		Zobne bolezni in endodontija				
Course title:		Dental Pathology and endodontics				
Študijski program in stopnja Study programme and cycle		Študijska smer Study option		Letnik Year of study	Semester Semester	
Dentalna medicina/Dental Medicine 2. stopnja/2nd cycle				4	8	
Vrsta predmeta / Course type				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
30			60		30	4
Nosilec predmeta / Lecturer:		red. prof. dr. Ivana Brekalo Pršo red. prof. dr. Alen Braut				
Jeziki / Languages:	Predavanja / Lectures:	slovenščina/slovene				
	Vaje / Tutorial:	slovenščina/slovene				
Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:			Prerequisites:			
Vsebina:			Content (Syllabus outline):			
<p>Posredno in neposredno prekrivanje pulpe in regenerativne sposobnosti pulpe. Materiali za direktno in indirektno pokrivanje pulpe. Oskrba zapletenih karioznih lezij. Komplicirana rekonstrukcija krone zoba. Lito, keramično in kompozitno polnilo (vložek, inlay, onlay, overlay). Akutna in kronična poškodba zobnih kron in njihova oskrba.</p> <p>Uvod v endodontijo. Zobna pulpa in periradikularna tkiva. Osnovne funkcije zobne pulpe. Sterilizacija in suho delovno polje. Reakcija pulpe na karies in zunanji dražljaji. Mehanizem nastajanja dentinske in pulpne bolečine. Etiologija pulpnih in periapikalnih bolezni. Bolezni pulpe in periapiksa. Regresivne in degenerativne spremembe pulpnega tkiva. Akutni in kronični pulpitis. Nekroza pulpe. Akutni in kronični apikalni parodontitis. Indikacije in kontraindikacije za endodontsko zdravljenje. Morfologija endodontskega prostora. Priprava dostopne votline. Diagnostični postopki v endodontiji. Endodontska radiografija. Endodontski instrumenti (ročni, strojni, ultrazvočni). Določanje dolžine korenskega kanala. Pulpotomija, pulpektomija. Instrumentacija endodontskega prostora. Kemična obdelava koreninskega kanala.</p>			<p>Indirect and direct pulp capping and regenerative capacity of pulp. Materials for direct and indirect pulp capping. Disruption of complex carious lesions. Complicated reconstruction of tooth crown. Cast, ceramic and composite fillings (inlay, onlay, overlay). Acute and chronic trauma of tooth crowns and their care.</p> <p>Introduction to endodontics. Dental pulp and periradicular tissue. Basic dental pulp functions. Sterilization and isolation the operative field. Reaction of pulp on caries and external stimuli. Mechanisms of pain from dentin and pulp.</p> <p>Etiology of pulp and periapical diseases. Diseases of pulp and periapical region. Regressive and degenerative changes in pulp tissue. Acute and chronic pulpitis. Pulp necrosis. Acute and chronic apical periodontitis. Indications and contraindications for endodontic treatment.</p> <p>Morphology of endodontic space. Access cavity preparations. Diagnostic procedures in endodontics. Endodontic radiography. Endodontic instruments (hand, rotary, ultrasound). Determination of root canal length. Pulpotomy, pulpectomy. Instrumentation of endodontic space. Chemical treatment of root canal.</p>			

Temeljni literatura in viri / Readings:	
<ul style="list-style-type: none"> - Summitt JB, Robbins JW, Schwartz RS. Fundamentals of Operative Dentistry, 4th Ed. Quintessence Publishing Co, Illinois, 2013. - Torabinejad M, Ashraf F. Fouad, Shahrokh Shabahang. Endodontics - Principles and Practice, 6th Edition, Elsevier, 2020. - Hargreaves K, Berman L. Cohen's Pathways of the Pulp, 12th Edition, Elsevier, 2020. - 	
Cilji in kompetence:	Objectives and competences:
<p>Usposobiti študenta za diagnostiko in načrtovanje zdravljenja napredovalih karioznih lezij, ki so prizadele večji del trdega zobnega tkiva. Poudarek je na novih zobnih materialih za direktna in indirektna polnila in materialih, ki spodbujajo reparatorno sposobnost zobne pulpe. Študenti so tudi usposobljeni za oskrbo akutne in kronične travme zobne krone.</p> <p>Predmet obsega tudi področje endodontije, katerega cilj je spoznati študente z etiologijo, diagnosticiranjem in zdravljenjem endodontskih bolezni in periapikalnega tkiva. Na tem področju se obdelujejo vnetne, travmatske in degenerativne spremembe pulpne in periapikalnega tkiva ter diagnostični in terapevtski postopki.</p>	<p>The aim of the course is to enable the student to diagnose and set up a therapy plan for advanced carious lesions that affected most of the hard dental tissue. The emphasis is on new dental materials for direct and indirect fillings and materials that stimulate the dental pulp repair ability. Students are also trained to treat acute and chronic tooth crown injuries.</p> <p>The course also covers the area of endodontics aimed at introducing students with etiology, diagnosis and therapy of endodontic and periapical tissue diseases. In this area, inflammatory, traumatic or degenerative changes in pulp and periapical tissue topics are covered, as well as diagnostic and therapeutic procedures.</p>
Predvideni študijski rezultati:	Intended learning outcomes:
<p>Znanje in razumevanje:</p> <ul style="list-style-type: none"> - Znati uporabiti pridobljeno znanje iz restavrativne stomatologije za oskrbo zapletenih kariesnih lezij in bolezni pulpe. - Opisati indikacijska področja za izdelavo indirektnih restavracij zobne krone. - Poznati vitalne metode zdravljenja pulpe. - Poznati postopke posrednega in neposrednega prekrivanja pulpe. - Opisati vrste travme zobne krone, njihovo razvrstitev in oskrbo. - Opisati etiološke dejavnike pulpnih in periapikalnih bolezni. - Poznati patohistološko in klinično sliko pulpitisa in apikalnega parodontitisa. - Določiti terapevtske smernice za zdravljenje vnetnih in regresivnih sprememb pulpe ter lezij apikalnih parodontalnih tkiv. - Podrobno spoznati morfologijo endodontskega prostora vseh zob. - Opisati lastnosti in uporabo ročnih in strojnih endodontskih instrumentov. - Poznati tehnike instrumentacije korenskega kanala in njegovo kemično obdelavo. 	<p>Knowledge and understanding:</p> <ul style="list-style-type: none"> Know to apply the acquired knowledge from restorative dentistry for the care of complicated caries lesions and pulp diseases; Describe the indications for indirect tooth crown restorations; Know vital pulp therapy methods; Know the procedures for indirect and direct pulp capping; Describe the types of tooth crown trauma, their classification and treatment; Describe the etiologic factors of pulp and periapical diseases; Familiar with the pathohistological and clinical significance of pulpitis and apical periodontitis; Determine therapeutic guidelines for the treatment of inflammatory and regressive changes in pulp and lesions of apical periodontal tissue; To know in detail the morphology of the endodontic space of all teeth; Describe the properties and application of hand and rotary endodontic instruments; Know the techniques of root canal instrumentation and its chemical treatment.
Znanja in spretnosti so podrobneje opisane v Katalogu znanj in spretnosti.	Knowledge and skills are described in more detail in the Catalogue of Knowledge and Skills.
Metode poučevanja in učenja:	Learning and teaching methods:

Predavanja Klinične vaje		Lectures Clinical training	
Načini ocenjevanja:		Delež (v %) / Weight (in %)	Assessment:
Način (pisni izpit, ustno izpraševanje, naloge, projekt):			Type (examination, oral, coursework, project):
<ul style="list-style-type: none"> - praktični izpit 30 % - pisni izpit 30 % - ustni izpit 40%. 		<p style="text-align: center;">30 %</p> <p style="text-align: center;">30 %</p> <p style="text-align: center;">40 %</p>	<ul style="list-style-type: none"> - Practical exam 30% - Written exam 30% and - Oral exam 40%.
Reference nosilca / Lecturer's references:			
<ol style="list-style-type: none"> 1. Vidas J, Snjaric D, Braut A, Carija Z, Persic Bukmir R, De Moor RJG, Brekalo Prso I. Comparison of apical irrigant solution extrusion among conventional and laser-activated endodontic irrigation. <i>Lasers Med Sci</i>. 2021 Feb;35(1):205-211. doi:10.1007/s10103-019-02846-w. 2. Brekalo Prso I, Mocny-Pachońska K, Trzcionka A, Pezelj-Ribaric S, Paljevic E, Tanasiewicz M, Persic Bukmir R. Empathy among dental students: An institutional cross-sectional survey in Poland and Croatia. <i>Eur J Dent Educ</i> 2020;24(4):687-694 3. Ema Paljevic; Ivana Brekalo Prso; Jelena Vidas Hrstic; Sonja Pezelj- Ribaric; Romana Persic Bukmir. Impact of Smoking on the Healing of Apical Periodontitis after Nonsurgical Endodontic Treatment. <i>European Journal of Dentistry</i> 2023. DOI: 10.1055/s-0043-1761451 4. Ema Paljević, Ivana Brekalo Pršo, Jelena Vidas Hrstić, Elvis Božac, Sonja Pezelj-Ribarić, Romana Peršić Bukmir. Healing of apical periodontitis in type II diabetes mellitus patients: A prospective study. <i>Oral Diseases</i>. 2023; 00:1-9. doi.org/10.1111/odi.14772 5. Saltović, E., Mijandrušić-Sinčić, B., Braut, A., Škrobonja, I., Sever, E., Glažar, I., Pezelj-Ribarić, S., Muhvić-Urek, M. Absence of Oral Opportunistic Infections in Patients with Inflammatory Bowel Disease Receiving Anti-TNF-α and Anti-Integrin-$\alpha 4 \beta 7$ Therapy (2022) <i>Dentistry Journal</i>, 10 (3) 6. Saltović, Ema ; Bonifačić Simčić, Irena ; Bonifačić, David ; Braut, Alen ; Vuletić, Vladimira ; Žigante, Martina ; Muhvić Urek, Miranda Taste disorder in patients with multiple sclerosis // <i>Acta stomatol Croat</i>. 2021 ; 55(1):91-102.. 2020. str. 100-100 7. 			