


UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Fiksna protetika 3.
Course title:	Fixed Prosthodontics 3.

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		5	9, 10

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		90		120	8

Nosilec predmeta / Lecturer:

red. prof. dr. Ivone Uhač

Jeziki /
Predavanja / Lectures: slovenščina/slovene

Languages:
Vaje / Tutorial: slovenščina/slovene

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:
Prerequisites:
Vsebina:

Biomehanika zoba nosilca. Predprotetična priprava: parodontološki, ortodontski in kirurški posegi za ustvarjanje pogojev za optimalno funkcijsko in estetsko rekonstrukcijo s fiksnimi protetičnimi nadomestki. Načrtovanje fiksne protetične terapije. Rehabilitacija stomatognatnega sistema s fiksnimi protetičnimi nadomestki. Krone in mostovi v kombiniranih protetičnih delih. Barva, spektrofotometri. Popolni keramični sistemi, digitalna tehnologija, CAD / CAM, 3D tiskalniki v izdelavi fiksnega protetičnega nadomestka. Estetska rekonstrukcija posameznega zoba in nasmeha s popolnoma keramičnimi sistemi. Estetske lupine. Nekovinski mostovi. Lupe in mikroskopi v fiksni protetiki. Krone in mostovi na implantatih.

Content (Syllabus outline):

Biomechanics of the abutment tooth. Pre-prosthodontic preparation: periodontal, orthodontic and surgical procedures in making conditions for optimal functional and aesthetical reconstruction with fixed prosthodontic restorations. Planning fixed prosthodontic therapy. Rehabilitation of the stomatognathic system with fixed prosthodontic restorations. Crowns and bridges in combined prosthodontic restorations. Colour, spectrophotometers. Total ceramic systems. Digital technology, CAD/CAM, usage 3D printers in the making of a fixed prosthodontic restoration. Aesthetic reconstructions of teeth and smile with total ceramic systems. Aesthetic veneers. Non-metal bridges. Loupes and microscopes in fixed prosthodontics. Crowns and bridges on implants.

Temeljni literatura in viri / Readings:

- Shillingburg HT.et al. Fundamentals of fixed prosthodontics, 4th ed. Quintessence Pub. Co. 2012.
- HagiwaraY. Color Atlas of Fixed Prosthodontics, Quintessence Pub. Co. 2013.

Cilji in kompetence:
Objectives and competences:



Cilj predmeta je seznaniti študente s kompleksnimi kliničnimi in laboratorijskimi metodami rekonstrukcije in rehabilitacije s fiksnimi protetičnimi nadomestki s posebnim poudarkom na sodobnih digitalnih tehnologijah, CAD/CAM in 3D izpisih pri izdelavi fiksne protetične zamenjave, kompletnih keramičnih sistemov in implantoprotetične terapije. Poseben poudarek je na interdisciplinarnem sodelovanju med ekipami zdravnikov različnih specialnosti s ciljem oskrbe zapletenih primerov s področja oralne rehabilitacije.

Predvideni študijski rezultati:

Znanje in razumevanje:

Študent bo sposoben:

- Analizirati fiziologijo in biomehaniko stomatognatnega sistema.
- Analizirati komponente stomatognatnega sistema in opisati način medsebojnega delovanja.
- Oceniti nastanek, smer in učinek žvečilnih sil.
- Analizirati fiksno protetično delo kot terapevtsko orodje.
- Primerjati izbor materialov in vrste fiksno-protetičnega del glede na trajnost, vzdržljivost, biokompatibilnost in učinkovitost izvedenega zdravljenja.
- Oceniti biološke značilnosti nosilnih zob.
- Določiti načrt fiksne protetične terapije.
- Analizirati vpliv endokrinoloških, imunoloških, onkoloških, metabolnih in kardiovaskularnih bolezni na planiranje, izvajanje in uspeh fiksno protetične terapije.
- Izbrati zobne nosilce in planirati fiksno protetično terapijo.
- Definirati predprotetično pripravo bolnika za fiksno protetično terapijo.
- Analizirati fiksno-protetično delo pri preprečevanju in zdravljenju parodontalnih bolezni.
- Postaviti indikacijo, načrtovati ter analizirati fiksno protetični vidik kombinirane protetične terapije.
- Oceniti uporabo vsadkov kot podlago za razvoj fiksne nadomestne proteze.
- Postaviti indikacijo in izvršiti pripravo za zapletene fiksne protetične konstrukcije: keramične lupinice, inleje, onleje, overleje, endokrone in nekovinske mostove.
- Registrirati medčeljustne odnose v maksimalni interkuspilaciji, sredinski relaciji in ekscentričnem položaju.
- Prenesti modele v polprilagodljiv artikulater ter ga individualizirati.

Znanja in spretnosti so podrobneje opisane v Katalogu znanj in spretnosti.

The aim of this course is to introduce students with complex clinical and laboratory procedures of reconstruction and rehabilitation with fixed prosthodontic restorations with a special review on contemporary digital technologies, CAD/CAM and 3D printing in the making of fixed prosthodontic restorations, total ceramic systems and implant prosthodontic therapy.

A particular emphasis is given to interdisciplinary collaboration with doctors of different specialties all for the purpose of treating complex cases of oral rehabilitation.

Intended learning outcomes:

Students will be able to:

- Analyse physiology and biomechanics of the stomatognathic system.
- Analyse components of the stomatognathic system and describe their interaction.
- Evaluate the occurrence, direction and activity of masticatory forces.
- Analyse a fixed prosthodontics restoration as a mean of therapy.
- Compare material choice and types of fixed prosthodontic restorations on durability, suppleness, biocompatibility and success of proceeded therapy.
- Evaluate biological traits of abutment teeth.
- Define a plan for fixed prosthodontic therapy.
- Analyse the effect of endocrinological, immunological, oncological, metabolic and cardiovascular diseases on planning, proceeding and success of fixed prosthodontics therapy.
- Choose the abutment teeth and plan fixed prosthodontic therapy.
- Define pre-prosthodontic treatments of the patient for fixed prosthodontic therapy.
- Analyse a fixed prosthodontic restoration in prevention and therapy of periodontal diseases.
- Indicate, plan and analyse the fixed prosthodontic aspect of a combined prosthodontic therapy.
- Evaluate the advisability of using implants as a base for making fixed prosthodontic restorations.
- Indicate and prepare teeth for complex fixed prosthodontic constructions: ceramic veneers, inlays, onlays, overlays, endo-crowns and non-metal bridges.
- Register jaw relations in maximum intercuspidation, centric relation and excentric positions.
- Transfer models in a semi-adjustable articulator and individualise it.

Knowledge and skills are described in more detail in the Catalogue of Knowledge and Skills.

**Metode poučevanja in učenja:**

Seminarji
Klinične vaje

Learning and teaching methods:

Seminars
Clinical training

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Način (pisni izpit, ustno izpraševanje, naloge, projekt)	25 %	Type (examination, oral, coursework, project): <u>Practical work</u>
<u>Praktični del</u>		
<u>kolokvij v pisni obliki</u>	15 %	<u>Written partial exam</u>
<u>Zaključni izpit je ustni</u>	60 %	<u>The final exam is an oral exam:</u>

Reference nosilca / Lecturer's references:

1. Tamarut T, Kovačević M, **Uhač I**. Detection of transitional ion concentration zone during electronic measurement of root canal length: a study in vitro. International Endodontic Journal 2000;33:374-380. **(CC)**
2. Gržič R, Kovač Z, Kovačević D, **Uhač I**, Delić Z. Kineziografska istraživanja pacijenata s križnim zubom. Coll Antropol. 2000, 24. Suppl; 1:57-62. **(CC)**
3. **Uhač I**, Kovač Z, Vukovojac S, Žuvić-Butorac M, Gržič R, Delić Z. The effect of occlusal relationships on the occurrence of sounds in the temporomandibular joint. Coll Antropol. 26(2002); 285-292. **(CC)**
4. Kovačević D, Delić Z, Čelebić A, Kovač Z, Gržič R, **Uhač I**, Zlatarić DK. Three month change in the radiodensity of alveolar bone supporting partial-denture abutment teeth. Coll Antropol. 2002. Dec;26 suppl:171-6. **(CC)**
5. **Uhač I**, Kovač Z, Valentić-Peruzović M, Juretić M, Moro Lj, Gržič R. The influence of war stress on the prevalence of signs and symptoms of temporomandibular disorders. J Oral Rehabil. 2003;30:211-217. **(CC)**
6. Muhvić-Urek M, Bralić M, Tomac J, Borčić J, **Uhač I**, Glažar I, Antonić R, Ferreri S. Early and late effects of X-irradiation on submandibular gland: a morphological study in mice. Arch Med Res 2005;33:339-343. **(CC)**
7. Kovač Z, **Uhač I**, Buković D, Čabov T, Kovačević D, Gržič R. Oral health status and temporomandibular disorders in multiple sclerosis patients. Coll Antropol. 2005 Dec;29(2):441-4. **(CC)**
8. **Uhač I**, Kovač Z, Muhvić-Urek M, Kovačević D, Frančisković T, Šimunović-Šoškić M. The prevalence of temporomandibular disorders in war veterans with post-traumatic stress disorder. Mil Med. 2006 Nov;171(11):1147-9. **(CC)**
9. Muhvić-Urek M, **Uhač I**, Vukšić-Mihaljević Z, Leović D, Blečić N, Kovač Z. Oral health status in war veterans with post-traumatic stress disorder. J Oral Rehabil. 2007 Jan;34(1):1-8. **(CC)**
10. Simonić-Kocijan S, **Uhač I**, Braut V, Kovac Z, Pavčić DK, Fugosić V, Urek MM. Influence of chronic stress and occlusal interference on masseter muscle pain in rat. Coll Antropol. 2009 Sep;33(3):863-6. **(CC)**
11. Ardu S, Braut V, **Uhač I**, Benbachir N, Feilzer AJ, Krejci I. A new classification of resin-based aesthetic adhesive materials. Coll Antropol. 2010 Sep;34(3):1045-50. **(CC)**
12. Ardu S, Braut V, **Uhač I**, Benbachir N, Feilzer AJ, Krejci I. Influence of mechanical and chemical degradation on surface gloss of resin composite materials. Am J Dent. 2009 Oct;22(5):264-8. **(CC)**
13. **Uhač I**, Tariba P, Kovac Z, Simonić-Kocijan S, Lajnert V, Mesić VF, Kuis D, Braut V. Masticatory muscle and temporomandibular joint pain in Croatian war veterans with posttraumatic stress disorder. Coll Antropol. 2011 Dec;35(4):1161-6. **(CC)**
14. Simunović-Soskić M, Juretić M, Kovac Z, Cerović R, **Uhač I**, Antonić R, Pezelj-Ribarić S. Implant prosthetic rehabilitation of the patients with mandibular resection following oral malignoma surgery. Coll Antropol. 2012 Mar;36(1):301-5. **(CC)**
15. Simonić-Kocijan S, **Uhač I**, Tariba P, Fugosić V, Pavčić DK, Lajnert V, Braut V. Alterations in the masseter muscle and plasma IL-6 level following experimentally induced occlusal interference and chronic stress--a study in rats. Coll Antropol. 2012 Jun;36(2):651-5. **(CC)**



16. Kovac Z, Troskot Z, **Uhač I**, Cabov T, Lajnert V, Pavčić DK, Filipović-Zore I, Tariba P. Multivariate analysis of different factors affecting the patient general satisfaction with complete dentures. *Coll Antropol.* 2012 Sep;36(3):791-.. **(CC)**
17. Grzić R, Spalj S, Lajnert V, Glavčić S, **Uhač I**, Pavčić DK. Factors influencing a patient's decision to choose the type of treatment to improve dental esthetics. *Vojnosanit Pregl.* 2012 Nov;69(11):978-85. **(SCI)**
18. Simonic-Kocijan S, Zhao X, Liu W, Wu Y, **Uhač I**, Wang K. . TRPV1 channel-mediated bilateral allodynia induced by unilateral masseter muscle inflammation in rats. *Mol Pain.* 2013 Dec 30;9:68. doi: 10.1186/1744-8069-9-68. **(CC)**
19. Muhvić-Urek M, Vukšić Ž, Simonić-Kocijan S, Braut V, Braut A, Uhač I. Co-occurrence of chronic head, face and neck pain, and depression in war veterans with post-traumatic stress disorder. *Acta Clin Croat.* 2015 Sep;54(3):266-71. **(CC)**
20. Tariba Knežević P, Vukman R, Antonić R, Kovač Z, Uhač I, Simonić-Kocijan S. The role of P2X3 receptors in bilateral masseter muscle allodynia in rats. *Croat Med J.* 2016 Dec 31;57(6):530-539. **(SCI)**
21. Pavicic DK, Spalj S, **Uhač I**, Lajnert V. A Cross-Sectional Study of the Influence of Tooth Color Elements on Satisfaction with Smile Esthetics. *Int J Prosthodont.* 2017 Mar/Apr;30(2):156-159. doi: 10.11607/ijp.5070. **(CC)**