

**Naziv predmeta:** Clinical and radiological examination of the success of implant-prosthetic treatment in completely edentulous patients

**Zavod/katedra na kojoj se predmet izvodi:** Department of Removable Prosthodontics

**Adresa sjedišta zavoda/katedre:** Ivana Gundulića 5, 10000 Zagreb

**Broj ECTS-a:** 4

**Nositelj predmeta:** prof.dr.sc. Robert Čelić

**Suradnici na predmetu koji sudjeluju u izvođenju nastave:** None

**Broj sati nastave**

	Br. sati
Predavanja	3
Seminari	7
Vježbe	10
Ukupno	20

1 sat = 45 minuta

**Opis predmeta:**

Implant-prosthetic therapy, today, is the standard form of prosthetic rehabilitation of patients with partial and complete loss of teeth. However, implant-prosthetic rehabilitation of completely edentulous patients, as socially and psychologically disabled persons (according to the WHO), it seems almost revolutionary breakthrough in our profession regarding improved functionality and quality of life of the same.

The purpose of this subject is to introduce and teach dentists and specialists of certain branches (primarily oral surgery and dental prosthetics, or other) to treat totally edentulous patients by means of implant-prosthetic restorations through standardized diagnostic and therapeutic procedures.

Through lectures and seminars students will learn about the consequences of complete loss of teeth as a result of the aging process but also wearing complete dentures. This dynamic state has its biomechanical repercussions on the entire masticatory system. The introduction of dental implants and the idea of osseointegration in oral rehabilitation of completely edentulous patients also bring new biomechanical moments concerning fixed and removable implant-prosthetics, knowledge and modifications of occlusal concepts for implant-prosthetic restorations and select the appropriate restorative biomaterials. Using diagnostic algorithms and the necessary knowledge, students will be able to learn and follow the process of planning and fabrication of fixed and removable implant-prosthetic restorations in completely edentulous patients from simple to more complex clinical cases.

Practical (working) part of the subject consists of learning and the adoption of standard diagnostic and therapeutic clinical laboratory procedures necessary for prosthetic rehabilitation of completely edentulous patients. This includes the use of modern software for the planning of implant-prosthetic therapy, performance impression techniques (with open or closed tray or their modifications), determination of the jaw relations in implant-prosthetic patients, selection of the appropriate abutments and retention-stabilization elements necessary for the fabrication of fixed and removable

implant-prosthetic restorations. Finally, it is important a system of maintenance, as well as identification and remediation of the complications of these types of implant-prosthetic restorations.

### Ishodi učenja:

1. to recognize the consequences of complete edentulism in context of the masticatory system and to learn about diagnostic methods necessary for the planning of the implant-prosthetic restorations (fixed and removable) in completely edentulous patients.
2. to plan fixed and removable implant-prosthetic restorations through the different loading protocols (delayed, early and immediate) in both jaws.
3. to get to know and adopt clinical laboratory phases of the fabrication of fixed and removable implant-prosthetic restorations in completely edentulous patients.
4. to become familiar with complex forms of implant-prosthetic treatment in completely edentulous patients (eg. the All-on-four system or using Zygoma implants in extremely atrophic upper edentulous jaw).

### Sadržaj predmeta

#### Predavanja

	<b>Teme predavanja</b>	<b>Broj sati nastave</b>
1.	Consequences of the complete edentulism – Diagnostic methods in implant-prosthetic rehabilitation of completely edentulous patients	1
2.	Removable and fixed prosthetic restorations supported by dental implants	1
3.	Occlusal concepts for fixed and removable implant-prosthetic restorations	1
4.	-	-
5.	-	-
6.	-	-
7.	-	-
8.	-	-
9.	-	-
10.	-	-

1 sat = 45 minuta

#### Seminari

	<b>Teme seminara</b>	<b>Broj sati nastave</b>
1.	Osseointegration and loading protocols (delayed, early and immediate) – a prosthetic aspect	1
2.	Biomechanics of complete edentulism, fixed and removable implant-prosthetic restorations	1
3.	Restorative materials for fixed and removable implant-prosthetic restorations in completely edentulous patients	1

4.	All-on-4 and modifications	1
5.	Indications for Zygoma implants and their prosthetic rehabilitations	1
6.	Implant-prosthetic therapy and bruxism in completely edentulous patients	1
7.	Scientific evidence of therapy success and complications of the implant-prosthetic restorations in completely edentulous patients	1
8.	-	-
9.	-	-
10.	-	-

1 sat = 45 minuta

### Vježbe

	Teme vježbi	Broj sati nastave
1.	Planning of the implant-prosthetic therapy in completely edentulous patients	1
2.	Diagnostics of the implant-prosthetic therapy in completely edentulous patients	1
3.	Use of modern software (eg. BTI Scan) for the planning implant-prosthetic therapy in completely edentulous patients	1
4.	Impression technique for removable implant-prosthetic restorations	1
5.	Impression technique for fixed implant-prosthetic restorations	1
6.	Laboratory procedure of making master models for fixed and removable implant-prosthetic restorations	1
7.	Selection of different types of the abutments for fixed and removable implant-prosthetic restorations	1
8.	Determination of jaw relationships for fixed and removable implant-prosthetic restorations	1
9.	Delivery of the final fixed and removable implant-prosthetic restorations (fixing systems: cementation and screws) and their maintenance	1
10.	Complications of the implant-prosthetic restorations in completely edentulous patients and their treatment	1

1 sat = 45 minuta

### Literatura

- Zarb G, Hobkirk JA, Eckert SE, Jacob RF. Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. St Louis, Mosby, 2013. ISBN:978-0323-07844-3
- Jimenez-Lopez V. Immediate Loading in Implant Dentistry. Surgical, Prosthetic, Occlusal, and Laboratory Aspects. Barcelona, Quintessence, 2005. ISBN:84-89873-33-X

3. Wismeijer D, Buser D, Belser U. ITI Treatment Guide. Loading Protocols in Implant Dentistry. Edentulous Patients. Berlin, Quintessence, 2010. ISBN: 978-3-938947-16-6
4. Bedrossian E. Implant Treatment Planning for the Edentulous Patient. A Graftless Approach to Immediate Loading. St Louis, Mosby, 2011. ISBN:978-0-323-07368-4
5. Aparicio C. Zygomatic Implants. The Anatomy-Guided Approach. London, Quintessence, 2012. ISBN:978-1-85097-225-9
6. Beumer III J, Faulkner RF, Shah KC, Moy PK. Fundamentals of Implant Dentistry. Prosthodontic Principles. Volume 1. Chicago, Quintessence, 2015. ISBN:978-0-86715-585-3
7. Wolfart S. Implant Prosthodontics. A Patient-Oriented Strategy. London, Quintessence, 2016. ISBN 978-1-85097-282-2

### Životopis voditelja kolegija i bibliografija

Robert Ćelić, born on October 15, 1970. in Metković, Croatia. He graduated from the Faculty of Dentistry in Zagreb in 1995. From the same year he was employed as a research fellow at the Department of Dental Prosthodontics, Faculty of Dentistry, University of Zagreb. He enrolled in postgraduate studies in 1995 and passed all mandatory exams. He received his master's degree with the topic "Examination of the relationship between temporomandibular disorders and the state of occlusion" in 1999. He passed his doctoral dissertation entitled "Investigation of temporomandibular disorders using the research diagnostic criteria for temporomandibular disorders (RDC/TMD) protocol" in 2003. The specialization exam in dental prosthetics passed in 2004. He was elected to the scientific-teaching title of assistant professor in 2007, associate professor in 2011, and full professor in 2021 at the Department of Removable Prosthodontics, Faculty of Dentistry in Zagreb. As a Head of the Department of Removable Prosthodontics was elected in 2012 and his mandate lasts until today (he has been elected three times). Within his professional activity he shows special interest in the field of dental prosthetics related to the problems of completely and partially edentulous patients (emphasis on the application of modern technologies such as CAD/CAM systems and three-dimensional printing), as well as in the field of diagnosis and treatment of patients with temporomandibular disorders. Furthermore, he focuses his interest in the field of implantology and implant prosthetics in the form of organizing and conducting working courses for specialist in dental prosthetics, general dentists, and dental technicians. He holds the title of European Implantologist verified by the European Association of Dental Implantologists (2017).

He actively participates in scientific and professional congresses in the country and abroad, as well as in numerous working and demonstration courses for continuous training of dentists. He is a member of the Croatian Dental Chamber, Croatian Society of Dental Prosthodontics, International Association for Dental Research, International College of Prosthodontists, European Prosthodontics Association, International Consortium for RDC-TMD Research, Croatian Society of Dental Implantology, International Team for Implantology, European Association for Osseointegration, European Association of Dental Implantologists, etc.

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