

Course title

Removable Prosthodontics I

Department

Department of Removable Prosthodontics

Address

School of Dental Medicine University of Zagreb, Gundulićeva 5, HR-10000 Zagreb

Status of course

Obligatory

Year of study in which the course is taught

4. year

Semester of study in which the course is taught

Winter and summer semester

ECTS points

9.5 ECTS

Course leader

Prof. dr. sc. Nikola Petričević, petricevic@sfzg.unizg.hr

Other teachers who participate

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Number of teaching hours

	Winter semester	Summer semester	Total (both semesters)
Lecture	15	-	15
Seminar	-	-	-
Practical course	45	45	90
Total	60	45	105

1 hour = 45 minutes

Type of exercises in the course

Clinical exercises in removable prosthodontics

Course description and goals

The Removable Prosthodontics I course program teaches dental students the basic biomedical and technological knowledge and skills on which clinical work is based during the fabrication of complete acrylic dentures, removable and fixed prosthodontic suprastructure supported by dental implants in completely edentulous patients, i.e. edentulous upper and lower jaws. The development of this program encourages students' ability to analyze the existing condition and select the best possible prosthodontic/implanto-prosthodontic therapy in a completely edentulous patient, based on an interdisciplinary approach for each individual clinical case, and to obtain a basic orientation in the prophylaxis and therapy of the stomatognathic system. This will establish satisfactory general and oral health primarily in edentulous patients of older age, but also in edentulous patients in general.

The curriculum enables students to learn:

- the importance of oral health and the need for prosthodontic therapy in a completely edentulous patient
- understand the functional anatomy of the masticatory system and the characteristics (functional, morphological and biomechanical) of complete edentulism
- recognize the pathological conditions of complete edentulism as well as the consequences of wearing complete dentures on the masticatory system and the patient's health
- learn diagnostic procedures relevant for the implementation of conventional and implant-prosthodontic therapy in a completely edentulous patient
- set an indication and based on it an appropriate plan for prosthodontic and implant- prosthodontic therapy in a completely edentulous patient
- understand and connect the laboratory and clinical process of making complete acrylic dentures
- know the materials and instruments as well as laboratory and clinical equipment and devices
- determine the type of building material with which prosthodontic /implant- prosthodontic therapy in a completely edentulous patient will be implemented
- implement a prosthodontic /implant- prosthodontic therapy plan and therapy for edentulous patients in order to improve oral health over a satisfactory period of time.

Course enrollment requirements

Passing the exam in Preclinical and Laboratory Removable Prosthodontics is a requirement for enrollment and taking the exam in Removable Prosthodontics I.

Learning outcomes at the level of the integrated undergraduate and graduate study program in Dental Medicine to which the course contributes:

- ☐ Knowledge, skills and competences related to professionalism, ethics and law
- ☐ Knowledge, skills and competences related to communication and social skills
- ☒ Knowledge, skills and competences related to basic knowledge and the ability to collect information from the literature
- ☒ Knowledge, skills and competences related to the collection of clinical information
- ☒ Knowledge, skills and competences related to diagnosis and therapy planning
- ☒ Knowledge, skills and competences related to therapy, establishment and maintenance of oral health
- ☒ Knowledge, skills and competences related to preventive measures and health promotion

Expected learning outcomes

Knowledge

1. Describe the anatomical features of completely edentulous upper and lower jaws (upper and lower complete dentures)
2. Know the techniques of taking anatomical and functional impressions in the production of complete dentures
3. Describe the procedure for determining the vertical and horizontal interjaw relationship in the production of a complete dentures
4. State the sequence of clinical and laboratory phases and procedures in the production of complete dentures

Skill

5. Take anatomical and functional impression of a completely edentulous patient
6. Determine interjaw relationships using occlusal rims in a completely edentulous patient wearing complete dentures
7. Use of face bow and dental articulator in the process of making complete dentures
8. Check teeth setup (wax trial/handover of finished complete dentures) in complete dentures based on general and specific rules of tooth alignment and occlusion characteristics

Competence

9. Make conventional acrylic complete dentures
10. Create an implant prosthodontic plan therapy for production of removable and fixed prosthodontic dentures in a completely edentulous patient based on clinical examination and radiological diagnostics

Course content**Lectures**

	Lecture topics in winter semester	Number of teaching hours
1.	Tooth extraction and residual ridge formation, alveolar ridge atrophy over time and classifications, denture bearing area anatomy, bone structures bone histology, mucosa and soft movable tissues, histology, treatment options in complete edentulous patients, McGill consensus	1
2.	Denture bearing area, first or preliminary impression, stock tray selection, impression materials, pouring (constructing) primary cast defining borders for custom tray fabrication	1
3.	Individual, or custom, or secondary impression, materials, border moulding, final impression, boxing impressions (border preservation), final cast construction	1
4.	Individual, or custom, or secondary impressions in patients having flabby ridges (relief holes in the custom tray, window technique), custom impression with dental implants and transfers, or with mini-	1

	implants, final cast construction with laboratory analogues in hard stone with border preservation	
5.	Vertical and horizontal jaw relationship determination in complete denture patient, fixation of the trimmed occlusal rims in patient's mouth	1
6.	Face-bow transfer, articulators, fixation of maxillary casts and jaw relationship records in articulators	1
7.	Choice, materials and arrangement (set-up) of anterior teeth	1
8.	Choice, materials and arrangement (set-up) of posterior teeth, occlusal concepts, Lingualised occlusion	1
9.	Factors influencing retention and stability of conventional complete dentures	1
10.	Complete denture wax-up, flasking and processing	1
11.	Remounting of complete dentures in dental laboratory after processing, remounting after denture delivery, occlusal adjustments, denture flange adjustments, patient recalls	1
12.	Cover dentures on residual roots, immediate dentures	1
13.	Errors in complete denture manufacturing, how to fix them, denture adjustments and post delivery care, repairs (tooth loss, fractures), denture hygiene maintenance	1
14.	Complete Implant overdentures	1
15.	Modalities to treat complete edentulous patients, removable implant overdentures, CAD/CAM complete dentures, implant-fixed prosthodontics, and all on 4	1

1 hour = 45 minutes

Course

	Course topics in the winter semester	Number of teaching hours Total 45 hours
1.	Anamnesis, x-ray analysis, study models analysis and treatment plan for complete edentulous patient	3
2.	First or preliminary impression	3
3.	Study models analysis, primary cast defining borders for custom tray fabrication	3
4.	Testing the custom trays in patient mouth	3
5.	Secondary impression using elastic and nonelastic materials	3
6.	Preparation and processing of occlusal rims	3
7.	Marking orientation lines for tooth setup on working models	3

8.	Vertical and horizontal jaw relationship determination in complete denture patient	3
9.	Working with articulators face-bow transfer	3
10.	Defining color, shape and size of artificial teeth for complete denture	3
11.	Clinical examination of artificial teeth setup	3
12.	Adjusting finished denture, occlusal adjustments	3
13.	Patient recalls, remounting of complete dentures, repairs in laboratory	3
14.	Special features in clinical work during fabrication of cover and immediate dentures	3
15.	Planing dentures retained by implants in complete edentulous patients. Special features in clinical work during fabrication of implant retained dentures – impression techniques, selection of retentive and stabilisation elements (attachments, bars, telescopic systems)	3
Course topics in the summer semester		Number of teaching hours
1.	Clinical exercises in removable prosthodontics	45

1 hour = 45 minutes

Student obligations

Students are required to attend classes and complete assigned tasks.

Monitoring student work

Students are required to attend lectures and special clinical courses. During special clinical courses, students' theoretical knowledge will be tested through "oral exams" before starting to work with patients. At the end of the semester, students will be assessed based on their knowledge and preparation in oral exams, their attitude towards patients, teachers and staff at the Department of Removable Prosthodontics. The grade will have an impact (as a weight for a higher or lower grade) on the final oral knowledge exam. In addition to the mandatory and recommended literature, additional information will be provided through teaching materials via e-learning (e.g., via the Merlin platform).

Taking the exam

The exam consists of an oral part of the exam. During the course, students' theoretical knowledge will be tested through oral exams before performing special clinical courses.

Exam date(s)

	Extraordinary exam periods			Regular exam period WINTER	Extraordinary exam periods		Regular exam period SUMMER		Regular exam period AUTUMN	
	November	December	January	February	April	May	June	July	August	September
Date(s)				26.01.- 30.01.2026. 9.02.- 13.02.2026.			08.06.- 12.06.2026	29.06.-3.07. 2026. 13.07.-17.07. 2026.	24.08.- 28.08. 2026.	07.09.- 11.09. 2026.

Mandatory literature

- Zarb GA, Bolender CL, Eckert SE, Fenton AH, Jacob RF, Mericske-Stern R. Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant- supported Protheses. London, New York: CV Mosby, 2003.
- Misch CE. Implant Dentistry. 2nd ed. St.Louis: Mosby Inc. 1999.

Additional literature

- Wismeijer D, Casentini P, Galluci G, Chiapasco M. Loading Protocols in Implant Dentistry – Edentulous Patients. ITI Treatment Guide. Volume 4. Berlin: Quintessence, 2010.
- Abe J, Kokubo K, Sato K. Mandibular Suction-Effective Denture and BPS: A Complete Guide. Tokyo: Quintessence, 2012.
- Wolfart S. Implant prosthetics. Patient-centered concept. Berlin-Zagreb: Quintessenz, 2017.