



**Course: Comprehensive Desntistry**

**Course Coordinator: Miranda Muhvić Urek, PhD, Professor**

**Department: Oral medicine**

**Study program: University Integrated Undergraduate and Graduate Study of Dental Medicine**  
(in English)

**Study year: 6th**

**Academic year: 2025/26**

## **SYLLABUS**

**Course description (a brief description of the course, general instructions, where and in what form the lessons are organized, necessary equipment, instructions for attendance and preparation for classes, student obligations, etc.):**

The course Comprehensive Dentistry is a mandatory course at the sixth year of the University Integrated Undergraduate and Graduate Study of Dental Medicine and consists of 30 hours of seminars and 30 hours of practicals, a total of 60 hours (5 ECTS). The course is held in the premises of the Clinic for Dental Medicine of the Clinical Hospital Center Rijeka and the Faculty of Dental Medicine, University of Rijeka. Part of the practicals are conducted in the Emergency Department of the Primorje-Gorski Kotar County Health Center and in the dental office of Laura Fosco Glavaš and Irene Bonifačić Simčić.

The aim of the course is to unify all theoretical and practical knowledge that students learn in clinical dental courses in order to provide comprehensive patient care. Special attention is paid to the diagnosis and treatment of emergency conditions and medically compromised patients in dental medicine.

**The course content is as follows:**

The course Comprehensive Desntistry provides students with a unified and interdisciplinary approach to the treatment of all diseases of the oral cavity. In seminars, students will analyze and discuss the influence of medical and biological factors on the planning and implementation of dental care, emergency and painful conditions. On clinical practicals, they practice the diagnosis and treatment of emergency conditions in dental medicine, the diagnosis and treatment of pathological conditions in dental medicine, and preventive measures.

**Learning outcome:**

- Analyze emergencies in dental medicine and perform first aid in dentistry depending on the case
- Categorize patients at risk in dental medicine
- Describe the specifics of dental therapy in patients at risk
- State and explain the use of analgesics, anaesthetics and antimicrobial drugs in dentistry; select and recommend a medication depending on the clinical case
- List and describe laser and ozone devices and their application in dental medicine
- Classify painful conditions in dental medicine
- Analyze clinical cases in dental medicine



- Select and implement diagnostic procedures in dental medicine depending on the clinical case
- Analyse RDG images
- Plan the therapy and perform the treatment in dental medicine depending on the clinical case

**Teaching:**

The teaching is conducted in the form of seminars and practicals. During the course, there will be 3 mandatory midterm exams, and at the end of the course, there will be a final practical and oral exam. Students have a **mandatory seminar** in the form of a presentation. By completing all teaching activities and taking the mandatory midterm exam and final exam, the student earns 5 ECTS credits.

**Course Collaborators:**

Miranda Muhvić Urek, PhD, Professor  
Irena Glažar, PhD, Professor  
Ema Saltović, PhD, DMD  
Laura Fosco Glavaš, DMD  
Irene Bonifačić Simčić, DMD  
Alen Braut, PhD, Professor  
Davor Kuiš, PhD, Professor  
Sunčana Simonić Kocijan, PhD, Professor  
Jelena Vidas Hrstić, PhD, Assist. Professor

**Assigned reading:**

Greenwood M, Corbett I. Dental emergencies. Wiley-Blackwell Publishing Ltd; 2012.  
[https://www.academia.edu/37337299/Dental\\_Emergencies\\_pdf](https://www.academia.edu/37337299/Dental_Emergencies_pdf)  
Little JW, Falace DA, Miller CS, Rhodus NL. Dental Management of the Medically Compromised Patient. Mosby; 2017.  
[https://www.academia.edu/38449684/Dental\\_Management\\_of\\_the\\_Medically\\_Compromised\\_Patient\\_7th\\_Ed\\_Falace\\_1](https://www.academia.edu/38449684/Dental_Management_of_the_Medically_Compromised_Patient_7th_Ed_Falace_1)  
Brugnera A Jr, Garrini dos Santos AEC, Bologna ED, Ladalardo TCCGP. Atlas of laser therapy applied to clinical dentistry. Hanover Park, IL: Quintessence Publishing Company; 2007.  
Lang NP, Lindhe J. Clinical Periodontology and Implant Dentistry. 6<sup>th</sup> ed. Wiley-Blackwell; 2015.  
[https://www.academia.edu/36609597/Niklaus\\_P\\_Lang\\_Jan\\_Lindhe\\_Clinical\\_Periodontology\\_and\\_Implant\\_Dentistry\\_2\\_Volume\\_Set\\_Wiley\\_Blackwell\\_2015\\_pdf](https://www.academia.edu/36609597/Niklaus_P_Lang_Jan_Lindhe_Clinical_Periodontology_and_Implant_Dentistry_2_Volume_Set_Wiley_Blackwell_2015_pdf)  
Okeson JP. Bell's orofacial pains: the clinical management of orofacial pain. 6th ed. Hanover Park, IL: Quintessence Publishing; 2005.  
<https://dental-library.com/bells-orofacial-pains-clinical-management-orofacial-pain-6th-edition/>  
Kay EJ, Shearer AC, Bridgman AM, Humphris GM, (editors). Integrated Dental Treatment Planning: A Case Based Approach. UK: Oxford University Press; 2005.

**Optional/additional reading:**

Burket's Oral Medicine, 13th Edition. 2021 Wiley-Blackwell

**COURSE TEACHING PLAN:**



**The list of seminars with descriptions:**

**S1. Local anesthetics**

**Learning outcomes:**

- classify local anesthetics

**S2. Local anesthesia techniques**

**Learning outcomes:**

- explain local anesthesia techniques
- explain the advantages and disadvantages of each local anesthesia techniques

**S3. Complications of local anesthesia**

**Learning outcomes:**

- explain, early and late, general and local complications of local anesthesia
- explain anti-shock therapy

**S4. Antibiotics in dental medicine**

**Learning outcomes:**

- argue the use of antibiotics for local and systemic therapy that are most commonly used in dental medicine
- explain the indications, contraindications and side effects of antibiotics that are most commonly used in dental medicine.

**S5. Analgesics in dental medicine**

**Learning outcomes:**

- classify the analgesics that are most commonly used in dental medicine
- explain the indications, contraindications and side effects of analgesics that are most commonly used in dental medicine.

**S6. Painful conditions in dentistry - Orofacial pain**

**Learning outcomes:**

- define and classify orofacial pain
- describe and explain diagnostic procedures of orofacial pain
- describe the treatment of orofacial pain

**S7. Painful conditions in dentistry - Atypical orofacial pain**

**Learning outcomes:**

- define atypical orofacial pain
- describe and explain diagnostic procedures
- describe the treatment of atypical orofacial pain

**S8. Temporomandibular disorders**

- explain the causes of painful temporomandibular disorders
- explain diagnostic procedures and treatment

**S9. Neuralgia and neuropathic pain of the orofacial region**

**Learning outcomes:**



- explain the etiology of neuralgia and neuropathic pain
- explain diagnostic procedures and treatment

#### **S10. Ozone in dentistry**

##### **Learning outcomes:**

- define and describe ozone and forms of ozone
- describe indications and contraindications for the use of ozone in dentistry

#### **S11. Lasers in dentistry**

##### **Learning outcomes:**

- define and explain laser beam
- classify and describe laser devices
- describe indications and contraindications for the use of lasers in dentistry

#### **S12. Dentine hypersensitivity and teeth whitening**

##### **Learning outcomes:**

- define dentine hypersensitivity
- describe theories on the development of dentine hypersensitivity
- describe diagnostic and therapeutic procedures for dentine hypersensitivity
- describe teeth whitening techniques
- explain indications and contraindications for teeth whitening

#### **S13&14. Dental Emergencies (1)**

##### **Learning Outcomes:**

- Define and recognize dental emergencies
- Perform diagnostic procedures

#### **S15&16. Dental Emergencies (2)**

##### **Learning Outcomes:**

- Perform treatment of dental emergencies

#### **S17. Dental treatment of patients with diabetes**

##### **Learning outcomes:**

- explain and list the oral complications of diabetes
- explain the specifics of dental therapy in patients with diabetes
- explain hypoglycemic shock and its treatment

#### **S18. Cardiovascular diseases and dental treatment**

##### **Learning outcomes:**

- explain patients at risk from the group of cardiovascular diseases
- explain the connection between dental treatment and infective endocarditis
- explain the specifics of dental therapy in people with cardiovascular diseases.



**S19. Dental treatment of patients with kidney failure**

**Learning outcomes:**

- explain and list the oral complications of kidney failure
- explain the specifics of dental therapy in patients with kidney failure
- explain the precision of prescribing medications in patients with kidney failure

**S20. Blood clotting disorders and dental treatment**

**Learning outcomes:**

- explain the specifics of dental therapy in patients with blood clotting disorders

**S21. Addictive diseases and dental treatment**

**Learning outcomes:**

- explain and list the oral manifestations and complications of addiction (drug abuse, alcohol and smoking)
- explain the specifics of dental therapy in drug, alcohol and smoking addicts

**S22. Dental treatment of patients with HIV and hepatitis**

**Learning outcomes:**

- explain and list the oral manifestations and complications of HIV and hepatitis infections
- explain the specifics of dental therapy in these patients

**S23. Dental treatment of oncology patients undergoing radioation in the head and neck region**

**Learning outcomes:**

- explain and list the oral manifestations and complications of radiation in the head and neck area
- explain the specifics of dental therapy in these patients

**S24. Dental treatment of oncology patients treated with chemotherapy**

**Learning outcomes:**

- explain and list the oral manifestations and complications of chemotherapy
- explain the specifics of dental therapy in these patients

**S25. Dental treatment of transplanted patients**

**Learning outcomes:**

- explain and list the oral complications of transplantation
- explain the specifics of dental therapy in these patients

**S26. X-ray and RVG diagnostics**

**Learning outcomes:**

- explain X-ray diagnostic techniques in dental medicine
- explain the advantages and disadvantages of X-ray diagnostics in dental medicine
- describe the RVG device and the principle of its operation
- explain the advantages and disadvantages of RVG diagnostics in dental medicine

**S27. CT and CBCT diagnostics**



**Learning outcomes:**

- describe the working principle of CT
- explain the indications for the use of CT in dental medicine
- explain the advantages and disadvantages of using CT in dental medicine
- define and explain the working principle of CBCT
- explain the indications for the use of CBCT in dental medicine
- explain the advantages and disadvantages of using CBCT in dental medicine

**S28. Metal-free crowns and bridges**

**Learning outcomes:**

- describe ceramic systems
- explain advantages and disadvantages of each ceramic systems
- explain indications and contraindications for metal-free crowns and bridges

**S29. Veneers and microlaminates**

**Learning outcomes:**

- describe/define veneers and microlaminates
- describe procedure of tooth preparation for veneers
- state indications and contraindications for veneers and microlaminates

**S30. Facial aesthetics in dental medicine**

**Learning outcomes:**

- explain/define the concept of aesthetics in dental medicine
- explain the basics of the use of Botox and hyaluron in facial aesthetic

**The list of practicals with descriptions:**

The practicals from the course Comprehensive dentistry are performed at the Clinic for Dental Medicine of the Clinical Hospital Rijeka and the Faculty of Dental Medicine of the University of Rijeka. Some of the practicals are conducted in the Emergency Department of the Primorje-Gorski Kotar County Health Center and in the dental office of Laura Fosco Glavaš and Irena Bonifačić Simčić. During the practicals, students acquire diagnostic and therapeutic skills in dental medicine with an emphasis on emergency conditions, medically compromised patients and comprehensive dental-medical therapy.

**Learning outcome (knowledge):**

1. List and describe emergencies in dental medicine
2. List and explain high-risk patients in dental medicine
3. Describe the specifics of dental therapy in high-risk patients
4. List and explain the use of analgesics, anesthetics and antimicrobial drugs in dental medicine
5. List and describe laser and ozone devices and their changes in dental medicine
6. Classify and describe painful conditions in dental medicine
7. Analyze clinical cases in dental medicine
8. Plan of dental therapy

**Learning outcome (skills):**



1. Recognize a high-risk patient in dental medicine
2. Perform diagnostic procedures in dental medicine
3. Analyze X-ray images
4. Plan therapies in dental medicine depending on the clinical case
5. Perform treatments in dental medicine depending on the clinical case
6. Write a prescription depending on the clinical case

**Students' obligations:**

Students are required to attend class regularly and actively participate in all forms of instruction.

**Assessment (exams, description of written / oral / practical exam, the scoring criteria):**

Student assessment is carried out according to the current University of Rijeka Study Regulations. Student will be able to gather maximum 100 grading points during classes (maximum 70 grading points during classes and maximum 30 grading points at the final exam).

During classes, student may gather maximum 70 grading points. Ten points may be gained through seminar writing and presenting, and 60 points through 3 partial written tests/midterm test (1st- unguent dentistry (20 points), 2nd- patients at risk in dental medicine (20 points) and 3th- drugs in dentistry (20 points)). In order to gain the right to take the final exam, student must gather at least 35 grading points. Final exam is mandatory, and comprises practical (10 points) and oral (20 points) exam encompassing teaching matters defined by the study plan and program. Student may gather maximum 30 grading points at the final exam.

Final grade is formed on the basis of overall student activity, i.e. grading points gathered during classes and grading points from the final exam.

Grading points are coupled with grades upon passing of the final exam. On the basis of the points gathered, grade is formed depending on the percentage of grading points obtained.

The following are examples:

- A- excellent (5) - 90-100% of maximum grading points,
- B – very good (4) – 75-89.9% of maximum grading points,
- C – good (3) – 60-74.9% of maximum grading points,
- D - sufficient (2) - 50-59.9% of maximum grading points
- F- not sufficient (1) - <49.9% of maximum grading points.

**Other important information regarding to the course:**

Teaching contents and all information related to the course as well as exam dates are available on the Merlin platform and on the website of the Faculty of Dental Medicine.

For all additional questions and consultations, you can contact the subject manager at e-mail: [miranda.muhvic.urek@fdmri.uniri.hr](mailto:miranda.muhvic.urek@fdmri.uniri.hr)

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## COURSE SCHEDULE (for the academic year 2025/2026)

Date	Lectures (time and place)	Seminars (time and place)	Practicals (time and place)	Instructor
9.10.2025.		S1-3 On line		M. Muhvić Urek, professor
10.10. 2025.			P1-2 (12.30-14.00)	M. Muhvić Urek, professor  I. Glažar, professor
16.10.2025.		S4-5 online		Muhvić Urek, professor
17.10.2025.			P 3-4 (12.30-14.00)	Alen Braut, professor Muhvić Urek, professor
23.10.2025.		S6-9 On line		Muhvić Urek, professor
24.20. 2025.			P 5-6 (12.30-14.00)	Muhvić Urek, professor Laura fosco Glavaš. DMD
30.10.2025.		S10-12 On line		Muhvić Urek, professor
31.10.2025.			P7-8 (12.30-14.00)	Muhvić Urek, professor Laura Fosco Glavaš. DMD
6.11.2025.		S13-14 (Krešimirova 42)		Ema Saltović, PhD
7.11.2025.			P9-10 (12.30-14.00)	Muhvić Urek, professor I.Bonifačić Simčić, DMD
13.11.2025.		S15-16 (Krešimirova 42)		Muhvić Urek, professor
14.11.2025.			P11-12 (12.30-14.00)	Muhvić Urek, professor I.Bonifačić Simčić, DMD
20.11. 2025.		Midterm test-1 (Krešimirova 42)		
21.11.2025.			P13-14 (12.30-14.00)	Muhvić Urek, professor I. Glažar, professor
27.11.2025.		S17-20 (Krešimirova 42)		Muhvić Urek, professor
28.11.2025.			P15-16 (12.30-14.00)	Muhvić Urek, professor I. Glažar, professor
4.12.2025.		S21-25		Muhvić Urek, professor





		(Krešimirova 42)		
5.12.2025.			P17-18 (12.30-14.00)	D. Kiuš, professor Muhvić Urek, professor
11.12.2025.		Midterm test-2 (Krešimirova 42)		
12.12.2025.			P19-20 (12.30-14.00)	S. Simonić Kocijen, professor Muhvić Urek, professor
18.12.2025.		S26-27 On line		Muhvić Urek, professor
19.12.2025.			P21-22 (12.30-14.00)	J. Vidas Hrstoć, asist. Prof. Muhvić Urek, professor
15.1.2026.		S28-30 On line		Muhvić Urek, professor
16.1.2026.			P23-24 (12.30-14.00)	Muhvić Urek, professor I. Glažar, professor
22.1.2026.		Midterm test-3 (Krešimirova 42)		
			P25-30	Doctor in Emergency Department of the Primorje- Gorski Kotar County Health Center

**List of lectures, seminars and practicals:**

	<b>SEMINARS (Topics)</b>	<b>Teaching hours</b>	<b>Location/Lecture room</b>
1	<b>Local anesthetics</b>	1	On line
2	<b>Local anesthesia techniques</b>	1	On line
3	<b>Complications of local anesthesia</b>	1	On line
4	<b>Antibiotics in dental medicine</b>	1	On line
5	<b>Analgesics in dental medicine</b>	1	On line
6	<b>Painful conditions in dentistry - Orofacial pain</b>	1	On line
7	<b>Painful conditions in dentistry - Atypical orofacial pain</b>	1	On line
8	<b>Temporomandibular disorders</b>	1	On line
9	<b>Neuralgia and neuropathic pain of the orofacial region</b>	1	On line
10	<b>Ozone in dentistry</b>	1	On line



11	<b>Lasers in dentistry</b>	1	On line
12	<b>Dentine hypersensitivity and teeth whitening</b>	1	On line
13	<b>Dental Emergencies (1)</b>	1	Krešimirova 42
14	<b>Dental Emergencies (1)</b>	1	Krešimirova 42
15	<b>Dental Emergencies (2)</b>	1	Krešimirova 42
16	<b>Dental Emergencies (2)</b>	1	Krešimirova 42
17	<b>Dental-medical treatment of patients with diabetes</b>	1	Krešimirova 42
18	<b>Cardiovascular diseases and dental-medical treatment</b>	1	Krešimirova 42
19	<b>Dental treatment of patients with kidney failure</b>	1	Krešimirova 42
20	<b>Blood clotting disorders and dental treatment</b>	1	Krešimirova 42
21	<b>Addictive diseases and dental treatment</b>	1	Krešimirova 42
22	<b>Dental treatment of patients with HIV and hepatitis</b>	1	Krešimirova 42
23	<b>Dental treatment of oncology patients undergoing radioation in the head and neck region</b>	1	Krešimirova 42
24	<b>Dental treatment of oncology patients treated with chemotherapy</b>	1	Krešimirova 42
25	<b>Dental treatment of transplanted patients</b>	1	On line
26	<b>X-ray and RVG diagnostics</b>	1	On line
27	<b>CT and CBCT diagnostics</b>	1	On line
28	<b>Metal-free crowns and bridges</b>	1	On line
29	<b>Veneers and microlaminates</b>	1	On line
30	<b>Facial aesthetics in dental medicine</b>	1	On line
	<b>TOTAL TEACHING HOURS</b>	<b>30</b>	

	<b>PRACTICALS (Topics)</b>	<b>Teaching hours</b>	<b>Location/Lecture room</b>
1	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
2	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
3	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
4	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
5	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
6	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
7	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
8	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42



9	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
10	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
11	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
12	Diagnostics and therapy in dental medicine	2	Krešimirova 40/42
13	Diagnostics and therapy in dental medicine	2	Emergency Department of the Primorje-Gorski Kotar County Health Center
14	Diagnostics and therapy in dental medicine	2	Emergency Department of the Primorje-Gorski Kotar County Health Center
15	Diagnostics and therapy in dental medicine	2	Emergency Department of the Primorje-Gorski Kotar County Health
<b>TOTAL TEACHING HOURS</b>		<b>30</b>	

	<b>FINAL EXAM DATES</b>
1.	2/4/2025
2.	28/5/2025
3.	1/7/2025
4.	28/7/2025
4.	17/9/2025

	<b>Lectures</b>	<b>Seminars</b>	<b>Practicals</b>	<b>Total</b>
Total number	0	30	30	60
On-line	0	18	0	18
Percentage	0	60%	0	30%