



Course: Special care dentistry in children

Course Coordinator: Danko Bakarčić, DDM, PhD, professor

Department: Pediatric dentistry

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

Study year: 5

Academic year: 2026./27.

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.):

Course Coordinator:

Prof. Prim. Danko Bakarčić, MD, DMD, PhD

Teaching Staff:

- Prof. Prim. Danko Bakarčić, MD, DMD, PhD
- Odri Cicvarić, DMD, PhD
- Marija Šimunović Erpušina, DMD
- Leda Bašić, DMD

Special Care Dentistry in Children is a compulsory course in the fifth year of the Integrated Undergraduate and Graduate University Study Programme in Dental Medicine. The course consists of 18 hours of lectures and 2 hours of practical training, for a total of 20 contact hours (1.5 ECTS credits). Teaching is conducted at the Department of Dental Medicine, University Hospital Centre Rijeka.

Course Objectives

The course aims to provide students with the knowledge and competencies necessary to achieve optimal oral health in patients from special population groups whose medical conditions, disabilities, or developmental disorders require modifications to conventional dental treatment.

Course Content

1. **Basic concepts**
 - Children with developmental disabilities



- Persons with disabilities
- Medically compromised patients
- Patients with chronic diseases
- Syndromes
- Pervasive developmental disorders (autism spectrum disorders) and intellectual disability
- Dental care for patients with behavioural disorders
- 2. Common neurological and neuromuscular disorders in children**
 - Epilepsy
 - Cerebral palsy
 - Muscular dystrophy
 - Dental management of patients with neurological and neuromuscular disorders
- 3. High-risk cardiovascular diseases**
 - Dental care for patients with cardiovascular disorders
- 4. Haematological diseases**
 - Anaemias
 - Leukaemias
 - Haemophilia
 - Thrombocytopenia
 - Dental management of patients with haematological disorders
- 5. Allergies and asthma**
 - Dental care for patients with asthma
- 6. Endocrine and metabolic disorders**
 - Dental management of patients with metabolic disorders, including diabetes mellitus
- 7. Coeliac disease**
 - Dental care for patients with coeliac disease
- 8. Dialysis**
 - Dental management of patients undergoing dialysis
- 9. Organ transplantation, immunosuppressive therapy, and autoimmune diseases**
 - Principles of organ transplantation
 - Dental care for transplant recipients
 - Dental management of patients receiving immunosuppressive therapy or affected by autoimmune diseases
- 10. Antibiotic prophylaxis prior to dental procedures**
- 11. Dental care for patients with visual and hearing impairments**
- 12. Dental care for persons with disabilities**
- 13. Syndromes associated with orodental anomalies**
 - Down syndrome
 - Ectodermal dysplasias
 - Neurofibromatosis



- Tuberous sclerosis
- 14. Cleft lip, alveolus, and palate**
- 15. Dental treatment under general anaesthesia**

Teaching Methods

Teaching is delivered through **interactive lectures and practical training** over the course of one semester. During practical sessions, instructors demonstrate clinical procedures and supervise students' active participation. Discussions are held to address the specific clinical issues encountered during each practical session.

Throughout the semester, students complete several written knowledge assessments, followed by a **final written examination**. By fulfilling all course requirements, including attendance, participation in mandatory assessments, and passing the final examination, students earn **1.5 ECTS credits**

Assigned reading:

Kerr AR, Miller CS, Rhodus NL, Stoopler ET, Treister NS. *Little and Falace's Dental Management of the Medically Compromised Patient*. 10th ed. St. Louis (MO): Elsevier; 2024

Optional/additional reading:

Little JW, Miller CS, Rhodus NL. *Little and Falace's Dental Management of the Medically Compromised Patient*. 9th ed. St. Louis (MO): Elsevier; 2018

COURSE TEACHING PLAN:

The list of lectures (with topics and descriptions):

P1. Basic Concepts: Child with Developmental Disabilities, Person with Disabilities, Medically Compromised Patient, Patient with a Chronic Disease, Syndrome

Learning Outcomes:

- Distinguish between the terms: child with developmental disabilities, person with disabilities, medically compromised patient, patient with a chronic disease, and syndrome.

P2. Dental Treatment under General Anaesthesia

Learning Outcomes:

- Describe the principles and indications for dental treatment under general anaesthesia.

P3. Pervasive Developmental Disorders (Autism Spectrum Disorders) and Intellectual Disabilities

Learning Outcomes:



- Describe and distinguish pervasive developmental disorders (autism spectrum disorders).
- Describe intellectual disabilities.

P4. Dental Care for Patients with Behavioural Disorders

Learning Outcomes:

- Explain the fundamental principles of dental care for patients with behavioural disorders.

P5. Dental Care for Persons with Disabilities

Learning Outcomes:

- Explain the fundamental principles of dental care for persons with disabilities.

P6. Common Neurological and Neuromuscular Disorders in Children (Epilepsy, Cerebral Palsy, Muscular Dystrophy) and Dental Care

Learning Outcomes:

- Describe and distinguish the most common neurological and neuromuscular disorders in children, including epilepsy, cerebral palsy, and muscular dystrophy.
- Explain the fundamental principles of dental care for patients with neurological and neuromuscular disorders.

P7. Antibiotic Prophylaxis Prior to Dental Procedures

Learning Outcomes:

- Describe the indications and principles of antibiotic prophylaxis before dental procedures, including patients at risk of infective endocarditis, those undergoing haemodialysis, patients with prosthetic joints, transplant recipients, patients with diabetes mellitus, immunosuppressed patients, and patients at risk of medication-related osteonecrosis of the jaws.

P8. High-Risk Cardiovascular Diseases and Dental Care

Learning Outcomes:

- Describe and distinguish high-risk cardiovascular diseases.
- Explain the fundamental principles of dental care for patients with high-risk cardiovascular diseases.

P9. Endocrine and Metabolic Disorders

Learning Outcomes:

- Identify and distinguish endocrine and metabolic disorders.
- Explain the fundamental principles of dental care for patients with metabolic disorders, particularly diabetes mellitus.

P10. Coeliac Disease and Dental Care

Learning Outcomes:

- Describe coeliac disease.
- Explain the fundamental principles of dental care for patients with coeliac disease.



P11. Allergies and Asthma

Learning Outcomes:

- Explain the mechanisms underlying allergic reactions.
- Define and describe asthma.
- Explain the fundamental principles of dental care for patients with asthma.

P12. Dental Care for Patients with Visual and Hearing Impairments

Learning Outcomes:

- Explain the fundamental principles of dental care for patients with visual and hearing impairments.

P13. Haematological Diseases

P14. Dental Care for Patients with Haematological Diseases

Learning Outcomes:

- Describe and distinguish haematological diseases, including anaemias, leukaemias, haemophilia, and thrombocytopenia.
- Explain the fundamental principles of dental care for patients with haematological diseases.

P15. Principles of Organ Transplantation, Immunosuppressive Therapy, and Autoimmune Diseases

P16. Dental Care for Patients with Transplanted Organs, Receiving Immunosuppressive Therapy, or with Autoimmune Diseases

Learning Outcomes:

- Distinguish between patients with transplanted organs, those receiving immunosuppressive therapy, and patients with autoimmune diseases.
- Explain the fundamental principles of dental care for transplant recipients, patients receiving immunosuppressive therapy, and patients with autoimmune diseases.

P17. Syndromes Associated with Orodental Anomalies (Down Syndrome, Ectodermal Dysplasias, Neurofibromatosis, Tuberous Sclerosis)

Learning Outcomes:

- Describe syndromes associated with orodental anomalies.
- Describe and distinguish the clinical manifestations of the most common syndromes affecting the orofacial region, including Down syndrome, ectodermal dysplasias, neurofibromatosis, and tuberous sclerosis.

P18. Needlestick Injury

Learning Outcomes:

- Describe a needlestick injury.
- Explain the appropriate management and post-exposure procedures following a needlestick injury



The list of seminars with descriptions:

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The list of practicals with descriptions:

Practical sessions for the course Special Care Dentistry in Children are conducted in the operating theatre of the Department of Paediatric Dentistry at the Clinic of Dental Medicine, University Hospital Centre Rijeka (location - Sušak).

Before attending the practical sessions, students are required to acquire the theoretical knowledge necessary for the practical procedures they will perform during the training.

Students' obligations:

Students are obliged to regularly attend and actively participate in all forms of classes.

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

Student assessment is conducted in accordance with the current Regulations on Studies of the University of Rijeka.

Students are assessed through continuous assessment during the course and a final written examination. A maximum of 100 points may be earned, of which 70 points are awarded during the semester and 30 points are awarded on the final examination.

Assessment is based on both the ECTS grading scale (A–F) and the Croatian numerical grading system (1–5). ECTS grades are assigned using an absolute grading scale.

All teaching activities are assessed, with a maximum possible score of 100 points. Students earn points through active participation in classes and successful completion of assigned tasks.

To be eligible to take the final examination, students must achieve at least 50% of the points available through continuous assessment, corresponding to a minimum of 35 out of 70 points. Students may earn a maximum of 70 points through continuous assessment.

Students who obtain fewer than 35 points (i.e., 34.99 points or less, corresponding to the ECTS grade F) are not eligible to take the final examination and must re-enrol in the course.

The remaining 30 points (30% of the final grade) are earned on the final examination. To successfully complete the course, students must pass the final examination. The minimum passing threshold is 50% of the points available on the final examination. Students who fail to achieve this threshold receive a failing final grade, regardless of their performance during the semester.

Final Grade

The final course grade is determined by adding the points earned through continuous assessment to the points earned on the final examination.

Final grade:

0- 49.9 = F



50-59.9 = D - 2

60-74.9 = C - 3

75-89.9 = B - 4

90-100 = A - 5

Other important information regarding to the course:

Any use of another's text or other form of author's work, as well as the use of ChatGPT or any of another tool whose functionality is based on artificial intelligence technology, without clear and unambiguous citation of sources, is considered a violation of someone else's copyright and the principle of academic integrity and represents serious violation of student obligations, which entails disciplinary responsibility and disciplinary measures accordingly to "Pravilnik o stegovnoj odgovornosti studenata (Rulebook on disciplinary responsibility of students)".

Consultation time: are available by appointment at least one day before.



COURSE SCHEDULE (for the academic year 2026/2027)

Date	Lectures (time)	Seminars (time)	Practicals (time)	Instructor
26.2.2027.	P1,P2 (08:00-09:30)			Prof.prim.dr.sc.Danko Bakarčić, dr.med.dent.
01.03.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
05.03..2027.	P3,P4 (08:00-09:30)			Prof.prim.dr.sc. Danko Bakarčić dr.med.dent.
08.03.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
12.03.2027.	P5,P6 (08:00-09:30)			Prof.prim.dr.sc. Danko Bakarčić dr.med.dent.
15.03.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
19.03.2027.	P7,P8 (08:00-09:30)			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
22.03.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent.



				Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
26.03.2027.	P9,P10 (08:00-09:30)			Prof.prim.dr.sc. Danko Bakarčić dr.med.dent.
02.04.2027.	P11,P12 (08:00-09:30)			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
06.04.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
09.04.2027.	P11,P14 (08:00-09:30)			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
12.04.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
16.04.2027.	P15,P16 (08:00-09:30)			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
19.04.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
23.04.2027.	P17,P18 (08:00-09:30)			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
26.04.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
30.04.2027.	nadoknade			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.



03.05.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
07.05.2027.	nadoknade			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
10.05.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
14.05.2027.	nadoknade			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
17.05.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
21.05.2027.	nadoknade			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
24.05.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.
28.05.2027.	nadoknade			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
31.05.2027.			V1 (8:00-9:30)	Prof.prim.dr.sc.DankoBakarčić, dr.med.dent. Dr.sc. Odri Cicvarić dr.med.dent. Marija Šimunović Erpušina dr.med.dent. Leda Bašić dr.med.dent.



04.06.2027.	nadoknade			Prof.prim.dr.sc.DankoBakarčić, dr.med.dent.
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List of lectures, seminars and practicals:

	LECTURES (Topics)	Teaching hours	Location/Lecture room
P1	Basic concepts: child with developmental disabilities, person with disabilities, medically compromised patient, patient with a chronic disease, syndrome	1	lecture room Kreš. 40
P2	Dental treatment under general anaesthesia	1	lecture room Kreš. 40
P3	Pervasive developmental disorders (autism spectrum disorders) and intellectual disabilities	1	lecture room Kreš. 40
P4	Dental care for patients with behavioural disorders	1	lecture room Kreš. 40
P5	Dental care for persons with disabilities	1	lecture room Kreš. 40
P6	Dental care for patients with neurological and neuromuscular disorders	1	lecture room Kreš. 40
P7	Antibiotic prophylaxis prior to dental procedures	1	lecture room Kreš. 40
P8	Dental care for patients with high-risk cardiovascular diseases	1	lecture room Kreš. 40
P9	Dental care for patients with metabolic disorders (diabetes mellitus)	1	lecture room Kreš. 40
P10	Coeliac disease and dental care for patients with coeliac disease	1	lecture room Kreš. 40
P11	Allergies and asthma: dental care for patients with asthma	1	lecture room Kreš. 40
P12	Dental care for patients with visual and hearing impairments	1	lecture room Kreš. 40
P13	Haematological diseases (anaemias, leukaemias, haemophilia, thrombocytopenia)	1	lecture room Kreš. 40
P14	Dental care for patients with haematological diseases	1	lecture room Kreš. 40
P15	Principles of organ transplantation, immunosuppressive therapy, and autoimmune diseases	1	lecture room Kreš. 40
P16	Dental care for patients with transplanted organs, patients receiving immunosuppressive therapy, and patients with autoimmune diseases	1	lecture room Kreš. 40
P17	Syndromes associated with orodental anomalies (Down syndrome, ectodermal dysplasias, neurofibromatosis, tuberous sclerosis)	1	lecture room Kreš. 40
P18	Needlestick injury	1	lecture room Kreš. 40



Total	18
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	SEMINARS (Topics)	Teaching hours	Location/Lecture room
	Total	0	

	PRACTICALS (Topics)	Teaching hours	Location/Lecture room
V1	Dental treatment under general anaesthesia for patients requiring special care	1	Operating theatre of the Department of Paediatric Dentistry at the Clinic of Dental Medicine, University Hospital Centre Rijeka (location - Sušak).
	Total	10	

	FINAL EXAM DATES
1.	11.06.2027.
2.	25.06.2027.
3.	02.07.2027.
4.	04.09.2027.

	Lectures	Seminars	Practicals	Total
Total number	18		2	20
On-line	0		0	0
Percentage	100		0	100