



**Course: Interdisciplinary Orthodontics**

**Course Coordinator: doc.dr.sc. Višnja Katić, dr.med.dent., spec. orthod**

**Course Collaborators: Dr.sc. Vjera Perković, Titular Assistant; Matea Badnjević, Teaching Assistant**

**Department: Department of Orthodontics**

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

**Study year: 6**

**Academic year: 2025/2026**

## **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 **Interdisciplinary Orthodontics** is a mandatory course in the sixth year of the Integrated undergraduate and graduate university study of Dental Medicine and consists of 10 hours of exercises and 5 hours of seminars, a total of 15 hours (2 ECTS). The course is conducted in the practicum of the Department of Orthodontics and lecture rooms and via e-courses on the Merlin platform.

The aim of the course is to introduce dental medicine students to the possibilities of orthodontic therapy in an interdisciplinary and multidisciplinary approach to solving clinical occlusal and aesthetic problems. The course content is as follows:

Interdisciplinary orthodontic - restorative therapy. Interdisciplinary approach to the therapy of impacted teeth. Pre-prosthetic and pre-implant orthodontics. Orthodontics and the periodontally compromised patient. Orthodontics and periodontal surgery. Periodontal-assisted orthodontics and orthodontic-assisted periodontology. Orthodontics and smile design. Interdisciplinary approach to patients with temporomandibular disorders. Multidisciplinary therapy of orofacial clefts. Multidisciplinary therapy of skeletal deformities and asymmetries.

Teaching:

The teaching is conducted in the form of seminars and exercises continuously during the 11th semester. During the seminar, the teacher assesses the students' readiness to present the topic and moderates the discussion. At the end, there is a final exam. By completing all teaching activities, presenting the seminar and taking the final exam, 2 ECTS points are earned.

### **Assigned reading:**

1. Proffit W i sur. Ortodoncija. Slap: Jastrebarsko; 2010. (7. dio. Terapija odraslih, str. 635-719.)
2. Nanda R. Biomechanics and esthetic strategies in clinical orthodontics. St. Louis: Elsevier Saunders; 2005. (Chapter 6. Esthetics in tooth display and smile design, pp.110-131; Chapter 18. Interrelationship of orthodontics with periodontology and restorative dentistry, pp. 348-373.)
3. McNamara JA Jr, Burdon WL. Orthodontics and dentofacial orthopedics. Ann Arbor: Needham Press Inc; 2001. (Chapter 25. Impacted teeth: orthodontic and surgical considerations, pp. 395-423; Managing orthodontic-restorative treatment of the adolescent patient, pp. 423-453; Chapter 29. Orthodontics, occlusion and temporomandibular disorders, pp. 519-545.)
4. Bishara SE. Textbook of orthodontics. Philadelphia: WB Saunders Company; 2001. (Section VI. Orthodontics and adjunct treatment, pp. 477-560.)

### **Optional/additional reading:**

1. Dibart S. Practical advanced periodontal surgery. Ames: Blackwell Munksgaard; 2007. (Chapter 4. Contribution of periodontology to orthodontic therapy, pp. 23-51.)



2. Melsen B. Adult orthodontics. Oxford: Blackwell Publishing; 2012. (Chapters 11-17, pp. 205-339).

#### **COURSE TEACHING PLAN:**

##### **The list of lectures (with topics and descriptions):**

##### **The list of seminars with descriptions:**

**S1. Interdisciplinary and multidisciplinary approach to achieving smile aesthetics and rehabilitation of impaired masticatory function**

**Learning outcomes:**

Discuss the interdisciplinary and multidisciplinary approach to achieving smile aesthetics and rehabilitation of impaired masticatory function.

**S2. Orthodontic – restorative, prosthetic and implantoprosthodontic therapy**

**Learning outcomes:**

Describe the possibilities and indications of orthodontic-restorative therapy. Describe the possibilities and indications of orthodontic-prosthetic and implantoprosthodontic cooperation in the treatment of hypodontia, oligodontia, tooth loss.

**S3. Orthodontic - periodontal therapy**

**Learning outcomes:**

Identify the indications and possibilities of orthodontic therapy in periodontally compromised patients. Discuss the possibilities and indications for the cooperation of orthodontics and periodontal surgery (periodontal-assisted orthodontics and orthodontic-assisted periodontology). Describe periodontal surgery with platelet-rich plasma (PRF).

**S4. Orthodontics and temporomandibular disorders**

**Learning outcomes:**

Describe the Diagnostic Criteria for Temporomandibular Disorders (DK/TMP) of the International Orofacial Pain Network. Describe the relationship between occlusion, posture, orthodontic therapy and TMP.

**S5. Orthodontic-surgical therapy**

**Learning outcomes:**

Analyze the possibilities and indications of orthodontic-oral surgical therapy (impacted and retained teeth, frenulectomies)

Explain the multidisciplinary approach in the therapy of orofacial clefts

Describe the possibilities and indications of orthodontic-orthognathic surgical therapy (skeletal malocclusions and asymmetries)

##### **The list of practicals with descriptions:**

The exercises from the course Interdisciplinary Orthodontics are performed in the office at the Clinic for Dental Medicine of the Rijeka University Hospital Center. During the clinical exercises, students will analyze and practically perform the acquired knowledge on patients in the daily interdisciplinary and multidisciplinary casuistry of the orthodontic office. Analysis and planning of therapy will be carried out on plaster and virtual models and computers in dedicated biometric software.

**Learning outcomes:**

Recognize and explain the possibilities and indications of orthodontic-periodontal therapy

Recognize and explain the possibilities and indications of orthodontic-prosthetic and implant-prosthetic cooperation

Recognize and explain the possibilities and indications of orthodontic-oral surgical therapy (impacted and retained teeth, frenulectomy)



Recognize and explain the possibilities and indications of orthodontic-orthognathic surgical therapy  
Recognize the types of temporomandibular disorders and explain the treatment options  
Recognize and explain the multidisciplinary approach in cleft therapy.

**Students' obligations:**

Students are required to attend and actively participate in all forms of teaching. Seminars and final exams are mandatory.

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

Date	Lectures (time and place)	Seminars (time and place)	Practicals (time and place)	Instructor
1.10.2025.			12:30-14:00	Višnja Katić
			Room 1	Matea Badnjević
			Krešimirova 40	
8.10.2025.			12:30-14:00	Višnja Katić
			Room 1	Matea Badnjević
			Krešimirova 40	
15.10.2025.			12:30-14:00	Višnja Katić
			Room 1	Matea Badnjević
			Krešimirova 40	
22.10.2025.			12:30-14:00	Višnja Katić
			Room 1	Matea Badnjević
			Krešimirova 40	
29.10.2025.			12:30-14:00	Višnja Katić
			Room 1	Matea Badnjević
			Krešimirova 40	
5.11.2025.		8:00-11:45		Vjera Perković
		online		



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

	<b>LECTURES (Topics)</b>	<b>Teaching hours</b>	<b>Location/Lecture room</b>
	<b>TOTAL TEACHING HOURS</b>		

	<b>SEMINARS (Topics)</b>	<b>Teaching hours</b>	<b>Location/Lecture room</b>
S1	Interdisciplinary and multidisciplinary approach in achieving smile aesthetics and rehabilitation of impaired masticatory function - case report and analysis	1	online
S2	Orthodontic - restorative, prosthetic and implantoprosthodontic therapy - presentation and case analysis	1	online
S3	Orthodontic - periodontal therapy - presentation and case analysis	1	online
S4	Orthodontics and temporomandibular disorders - case report and analysis	1	online
S5	Orthodontic-surgical therapy - presentation and case analysis	1	online
	<b>TOTAL TEACHING HOURS</b>	<b>5</b>	

	<b>PRACTICALS (Topics)</b>	<b>Teaching hours</b>	<b>Location/Lecture room</b>
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V1-10	Acquiring skills of an interdisciplinary and multidisciplinary approach in achieving smile aesthetics and rehabilitating impaired masticatory function	10	Room 1 Krešimirova 40
<b>TOTAL TEACHING HOURS</b>		<b>10</b>	

	<b>FINAL EXAM DATES</b>
1.	12.11.2025.
2.	28.1.2026.
3.	11.2.2026.

	<b>Lectures</b>	<b>Seminars</b>	<b>Practicals</b>	<b>Total</b>
Total number		5	10	15
On-line		5	0	5
Percentage		100%	0%	33%