Sveučilište u Rijeci
University of Rijeka

Sveučilište u Rijeci • Fakultet dentalne medicine
University of Rijeka • Faculty of Dental Medicine
Krešimirova 40/42 • 51000 Rijeka • CROATIA
Phone : + 385 51 559 200; 559 202, 559 203

Course: Clinical Orthodontics
Course Coordinator: asst. prof. Magda Trinajstić Zrinski, DMD, PhD, spec. orthod, asst. prof. Višnja Katić, DMD, PhD, spec. orthod.
Course Collaborators: prof. Stjepan Špalj, DMD, PhD; Vjera Perković, DMD, PhD; Matea Badnjević, DMD; Matea Tomljanović, DMD; Doris Šimac, DMD
Department: Department of Orthodontics
Study program: University Integrated Undergraduate and Graduate Study of Dental Medicine (in English)
Study year: 5th
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 **Clinical Orthodontics** is a mandatory course in the fifth year of the Integrated undergraduate and graduate program of Dental Medicine and consists of 30 hours of lectures, 60 hours of practicals and 30 hours of seminars, totaling 120 hours **(6 ECTS)**. The course is delivered in the premises of the Faculty of Dental Medicine and via e-course on the Merlin platform.

The aim of the course is for the student of dental medicine to become familiar with the ways of occurrence and development of malocclusions, to master skills of interceptive and preventive procedures, and acquire knowledge about the possibilities and methods of orthodontic treatment.

The content of the course is as follows:
Orthodontic anamnesis; Orthodontic clinical examination; Analysis of dentition; Predictive analyses of space in mixed dentition; Dentoalveolar discrepancy; Dentodental discrepancy; Analysis of occlusion on the cast
and the patient; Functional analysis in all three dimensions on the patient; Photography in orthodontics; X-rays - types, cephalometric analysis; Morphofunctional harmony in orthodontics; Assessment of the need for treatment using the Index of Orthodontic Treatment Need (IOTN); Frequency, etiology, characteristics, distribution, recognition on the cast and the patient, malocclusion treatment options (class I, class II/1 malocclusions, class II/2, class III, transverse malocclusions, vertical malocclusions); Harmful impact of premature tooth loss on the development of dentition; Impact of dental trauma on dentition development; Congenital anomalies of the dentofacial complex; The influence of anomalies of the number, shape and structure of teeth on the development of the dentition and the possibilities of treatment; Preventive measures in orthodontics; Interceptive measures in orthodontics and interceptive

orthodontic devices; Myofunctional orthodontic treatment; Physiology of mineralized tissues and reaction to applied force; Types of forces and displacements in orthodontics, adverse effects of orthodontic treatment; Principles of biomechanics in orthodontics; Functional appliances; Removable appliances; Fixed appliances; Extraoral appliances; Retention and relapse, retention appliances; Protocol of oral hygiene in orthodontics; Treatment plan, patient cooperation and motivation.

Conducting classes:
Classes are held in the form of lectures, practicals and seminars weekly during the 9th and 10th semester. During the practicals the teacher evaluates the student readiness to perform. During the seminar, the teacher evaluates student preparation for presenting the discussed topic and moderates the discussion. A mandatory midterm exam will be held and, at the end of classes, the final exam. By completing all student activities, passing the midterm exam and the final exam the student earns 6 ECTS points.

Course Coordinators:	**Course Collaborators:**
Asst. Prof. Magda Trinajstić Zrinski, DMD, PhD Asst. Prof. Višnja Katić, DMD, PhD	Prof. Stjepan Špalj, DMD, PhD Vjera Perković, DMD, PhD Matea Badnjević, DMD Matea Tomljanović, DMD Doris Šimac Pavičić, DMD

Assigned reading:

- Littlewood SJ, Mitchell L. An introduction to orthodontics. 5th ed. London: Oxford University Press; 2019
- Proffit, W.R. Contemporary Orthodontics. Philadelphia: Elsevier; 2019.

Optional/additional reading:

- Nanda R. Biomechanics and esthetic strategies in clinical orthodontics. St. Louis: Elsevier Saunders; 2005
- McNamara JA Jr, Burdon WL. Orthodontics and dentofacial orthopedics. Ann Arbor: Needham Press Inc; 2001
- Bishara SE. Textbook of orthodontics. Philadelphia: WB Saunders Company; 2001

COURSE TEACHING PLAN:

The list of lectures (with topics and descriptions):

L1. Orthodontic history and first examination
Learning outcomes:
Define, describe and take the patient's orthodontic history; define, describe and perform clinical orthodontic examination of the patient.

L2. Public health aspect of malocclusion
Learning outcomes:
Describe and determine the need for orthodontic treatment in the public health system in Croatia, the reasons for providing and seeking orthodontic treatment for malocclusions, preventive and economic aspects of malocclusions.

L3. Dental photography - principles of photographing and editing photographs
Learning outcomes:
Describe the need and method of photographing (intraoral, extraoral, calibration) as well as editing and presentations

L4. Analysis of symmetries and asymmetries
Learning outcomes:
Analyze the symmetry of the face and head
Analyze dental arches in transverse, sagittal and vertical planes, model analysis

L5. Anomalies in the number and position of teeth
Learning outcomes:
Define, list and analyze occlusion on the study cast and patient; Define, recognize and determine the influence of anomalies in the number, shape and structure of teeth on the development of the dentition, state the possibilities of treatment

L6. Impacted teeth
Learning outcomes:
Etiology, diagnosis and therapeutic approach

L7. Crowding
Learning outcomes:
Define and describe the frequency, etiology, characteristics and distribution of crowding, recognize it on the model and the patient, list treatment options

L8. Spacing
Learning outcomes:
Define and describe the frequency, etiology, characteristics and distribution of spacing, recognize it on the model and in the patient, indicate the possibilities of treatment

L9. Transverse malocclusions
Learning outcomes:
Define and describe the frequency, etiology, characteristics and division of crossbite, list the diagnostic procedures, recognize the anomaly on the cast and the patient, state the possibilities of treatment

L10. Vertical malocclusions - open and deep bite
Learning outcomes:
Define and describe the frequency, etiology, characteristics of vertical malocclusions, list diagnostic procedures, recognize malocclusion on the cast and the patient, state the possibilities of treatment

L11. Class II/1 malocclusion
Learning outcomes:

Define and describe the frequency, etiology, characteristics and division of class II/1, specify diagnostic procedures, recognize malocclusion on the cast and the patient, list the possibilities of treatment

L12. Class II/2 malocclusion

Learning outcomes:

Define and describe the frequency, etiology, characteristics and division of class II/2, state the diagnostic procedures, recognize malocclusion on the cast and the patient, state the possibilities of treatment

L13. Class III malocclusions

Learning outcomes:

Define and describe the frequency, etiology, characteristics and division of class III malocclusions, list the diagnostic ones procedures, recognize the malocclusion on the cast and the patient, list treatment options

L14. Congenital anomalies

Learning outcomes:

Define and describe congenital anomalies

L15. Orthodontic aspect of trauma and tooth extraction

Learning outcomes:

Determine the impact of dental trauma on the development of dentition; Describe the harmful impact of premature tooth loss on the development of dentition

L16. Bone biology and physiology of tooth movement

Learning outcomes:

Describe the physiology of mineralized tissues and the reaction to applied force

L17. Types of tooth movement and nature of orthodontic forces

Learning outcomes:

List and describe the types of forces and movements in orthodontics

L18. The concept of bony and non-bony anchorage

Learning outcomes:

Define anchorage and describe the procedures and devices for securing the anchorage

L19. Mechanical principles in orthodontic force control - types of wires (elasticity/plasticity), elastic elements, springs

Learning outcomes:

Define the sources of forces in orthodontics, elasticity and plasticity

L20. Dentofacial orthopedics - skeletal effects of orthodontic forces

Learning outcomes:

Amount, direction and age of skeletal effects of orthodontic forces; Description, recognition and mechanism of appliances used to achieve skeletal effects

L21. Side effects of orthodontic treatment

Learning outcomes:

Define the harmful effects of orthodontic forces and treatment

L22. Mechanisms of action and effect of removable appliances (plate, functional)

Learning outcomes:

State the possibilities and limitations of removable appliances; List and describe the modifications of the Schwarz plate and of the functional appliances and their effect (reduced activator, bionator, twin block, Fränkel)

L23. Mechanisms of action and effect of fixed appliances (segmental, continuous)

Learning outcomes:
List and describe the elements of segmental and continuous fixed appliances; Describe the bonding and fitting of a fixed appliance; State the treatment stages; List and describe segmental fixed appliances (Quad helix, transpalatal arch, lingual arch, lip bumper, Nance)

L24. Alveolar envelope - limitations of orthodontic treatment
Learning outcomes:
Describe the characteristics of the alveolar ridge, dentoalveolar compensation and the limits of orthodontic treatment.

L25. Assessment of the right time to start orthodontic treatment
Learning outcomes:
State how the right time to start treatment is defined, compare the treatment plan and cooperation and motivation of the patient; Define the importance of informed consent in orthodontics

L26. Management of eruption and serial extraction
Learning outcomes:
Describe the methods of guiding the eruption of teeth and the development of occlusion, the extraction sequence in serial extraction

L27. Malocclusions, orthodontic treatment and temporomandibular disorders
Learning outcomes:
Diagnosis of temporomandibular disorders, role of occlusion, malocclusion and orthodontic treatment in the etiology of disorders, treatment.

L28. Obstructive sleep apnea and orthodontics
Learning outcomes:
Recognize the signs and symptoms of obstructive sleep apnea and its connection with orthodontics

L29. Orthodontic treatment with aligners
Learning outcomes:
Define the possibilities and limitations of malocclusion treatment with aligners.

L30. Final conversation
Learning outcomes:
Summarize knowledge about orthodontics.

The list of seminars (with topics and descriptions):

S1. Oral hygiene protocol in orthodontics and prophylaxis
Learning outcomes:
Get to know prophylaxis methods and oral hygiene protocols necessary to maintain the health of the oral cavity during orthodontic treatment.

S2. Biological and psychological maturity, patient cooperation during treatment
Learning outcomes:
Define and describe social and behavioral development, stages of emotional and cognitive development, evaluate skeletal age and other parameters of developmental maturity. Assess the patient's cooperation during treatment

S3. Dental photography in orthodontic diagnostics
Learning outcomes:
Know how to take and analyze extraoral and intraoral photographs.

S4. Functions and parafunctions, functional analysis

Learning outcomes:
Know how to list and recognize parafunctions and perform functional analysis as part of an orthodontic clinical examination.

S5. Analysis of tooth position and occlusion, shape and symmetry of dental arches
Learning outcomes:
Define malpositions of teeth and types of malocclusions on diagnostic models. Know how to analyze the shape and symmetry within the dental arches with the use of the orthodontic measuring grid and Schmut measuring plate.

S6 Tooth size discrepancy and analysis of the curve of Spee
Learning outcomes:
Measure and explain the meaning of tooth size discrepancy according to Bolton and the possibility of correction. Define and describe the appearance of the curve of Spee in an individual case.

S7. Dento-alveolar discrepancy and predictive analyses in mixed dentition
Learning outcomes:
Measure and explain the meaning of dento-alveolar discrepancy according to Lundstrom. Be able to describe the measurements of dento-alveolar discrepancy according to Nance. Define, describe the importance and carry out prediction analysis on an individual case.

S8. Problem-based learning - case studies
Learning outcomes:
Presentation of the list of orthodontic problems and proposed treatment

S9. Problem-based learning - case studies
Learning outcomes:
Presentation of the list of orthodontic problems and proposed treatment

S10. Cephalometric X-ray analysis – definition of points and reference lines, as well as size and position of jaws
Learning outcomes:
Define the anatomical and projection points and reference lines necessary for the analysis of the lateral cephalogram. Know how to define, measure and interpret the parameters needed to determine the size and position of the jaws.

S11. Cephalometric X-ray analysis of growth pattern, position of incisors and soft tissues
Learning outcomes:
Know how to define, measure and interpret the parameters necessary to determine the growth pattern, position of incisors and soft tissues.

S12. Problem-based learning - case studies
Learning outcomes:
Presentation of the list of orthodontic problems and proposed treatment

S13. Assessment of orthodontic treatment needs (clinical indices and quality of life) and planning treatment
Learning outcomes:
Define indices for assessing the need for orthodontic treatment. Define a list of orthodontic problems and possible therapeutic solutions. Define the criteria by which the Croatian Health Insurance Fund (HZZO) covers orthodontic treatment.

S14. Problem-based learning - case studies
Learning outcomes:
Presentation of the list of orthodontic problems and proposed treatment

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S15. Problem-based learning - case studies
Learning outcomes:
Presentation of the list of orthodontic problems and proposed treatment
S16. Treatment of non-skeletal problems in children - crossbite and anterior crossbite
Learning outcomes:
Define crossbite and anterior crossbite, etiology and possible therapeutic solutions.
S17. Treatment of non-skeletal problems in children - bad habits, eruption, space, trauma
Learning outcomes:
Know how to recognize deleterious habits and suggest possible therapeutic solutions and myofunctional exercises. Define the problems of eruption, lack of space and trauma as etiological factors in the development of malocclusions and state possible therapeutic solutions.
S18. Extraction treatment and interproximal enamel reduction
Learning outcomes:
Explain the indications, purpose and implementation of extraction treatment and alternatives to extraction.
S19. Treatment of skeletal transverse problems in children
Learning outcomes:
Know the therapeutic options for skeletal transverse problems.
S20. Problem-based learning - case studies
Learning outcomes:
Presentation of the list of orthodontic problems and proposed treatment
S21. Problem-based learning - case studies
Learning outcomes:
Presentation of the list of orthodontic problems and proposed treatment
S22. Treatment of class II skeletal problems in children
Learning outcomes:
Know the therapeutic possibilities and limits for skeletal class II correction in children.
S23. Treatment of class III skeletal problems in children
Learning outcomes:
Know the therapeutic options for skeletal Class III correction in children, the right time for treatment, options and limits of treatment.
S24. Treatment of combined vertical and sagittal skeletal problems in children
Learning outcomes:
Know the therapeutic possibilities of combined vertical and sagittal problems in children.
S25. Comprehensive treatment with the fixed continuous appliance - bonding of the appliance, levelling phase
Learning outcomes:
Know the methods of placing the appliance, the duration, tooth displacements and the types of alloys and shapes of the archwires used in the levelling stage, and the behavior of the patient with a fixed appliance.
S26. Comprehensive treatment with the fixed continuous appliance - guidance phase, intermaxillary elastics
Learning outcomes:
Know the duration of tooth movement, types of orthodontic archwires and mechanics in the guidance phase. Describe the types of intermaxillary elastics . Know how to instruct the patient in orthodontic treatment in handling the appliance.

S27. Comprehensive treatment with the fixed continuous appliance - finishing phase, removal of the appliance, additional periodontal procedures.
Learning outcomes:
Know the duration of tooth movement, the types of orthodontic archwires in the finishing phase and the methods of removing the appliance, additional periodontal procedures.
S28. Retention, changes due to growth and aging, relapse
Learning outcomes:
Explain the causes of relapse of orthodontic anomalies and ways to prevent them. Know changes in the dentition after orthodontic treatment that occur due to growth and aging.
S29. Problem-based learning - case studies
Learning outcomes:
Presentation of the list of orthodontic problems and proposed treatment
S30. Problem-based learning - case studies
Learning outcomes:
Presentation of the list of orthodontic problems and proposed treatment

The list of practicals with descriptions:

Practicals in the Clinical Orthodontics course are performed in the clinic at the Clinic for Dental Medicine of the University Hospital Centre Rijeka. Before participating in the practicals, students are required to acquire theoretical knowledge and basic practical skills on models in pre-clinical practicals. During clinical practicals, students will work on patients to apply the acquired knowledge in the daily casuistry of the orthodontic office. Analysis and treatment planning will be carried out on real and virtual models and computers in dedicated biometric software.

Students' obligations:

Students are obliged to regularly attend and actively participate in all forms of classes. Exams, seminars, the presentation of the case report, and the final exam are mandatory.
A student may miss up to 30% of classes exclusively for health reasons, documented by a doctor's note. Attendance at lectures is compulsory. Missed classes must be compensated in agreement with the course coordinator. If a student misses more than 30% of classes (justified or unjustified), they cannot continue following the course and lose the possibility of taking the final exam. In that case, the student receives 0 ECTS credits and a grade of F.

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

ECTS credit rating system:
Student evaluation is carried out according to the valid **Rulebook on studies of the University of Rijeka**.
Students work will be evaluated during classes and at the final exam. Out of the total
100 grade points, a student can earn 50 points during classes and another 50 points on the exam.
Grading of students is done using ECTS (A-F) and numerical system (5-1). Grading in ECTS
to the system is performed by absolute distribution.

Students who obtain from **0 to 24.9%** of the grade points, that could be obtained during classes through forms of continuous monitoring and evaluation, are graded F (failed) and they cannot acquire ECTS credits and must re-enroll in the course.
The student acquires grade points by actively participating in classes, completing assigned tasks and going out to exams in the following way:

I. During the class, the following are assessed (maximum 50 points):
a) exam (up to 30 points)
b) case presentations (up to 10 points)
c) seminar paper (up to 10 points)

a) Exam (up to 30 points)
During classes, all students are obliged to participate in the exam, which earns them a maximum of 30 points, the percentage of resolution is multiplied by a weight of 0.3. The limit is 50% resolution.

c) Seminar (up to 10 points)

b) Presentation of the case (up to 10 points)
The evaluation of the presented seminar paper and the case presentation carries 10 evaluation points each (range from 0-10), and is converted into grade points as follows:

grade	grade points
2	4
2-3	5
3	6
3-4	7
4	8
4-5	9
5	10

Final exam (total 50 grade points)
The final exam consists of a practical and an oral part. Both are scored equally.

Who can take the final exam:
Students who achieved 25% or more grade points that could have been obtained during classes through forms of continuous monitoring and evaluation of students.

Who cannot take the final exam:
Students who, during classes, achieved from 0 to 24.9% of the grade points that could have been obtained during classes through forms of continuous monitoring and evaluation of students are graded F (failed), cannot acquire ECTS points and must re-enroll in the course .

The final exam carries **50 grade points** (range 0-50) and consists of a practical and a theoretical part.

Success in the practical and theoretical part of the final exam is converted into grade points as follows:

grade	grade points
2	12,5
2-3	15
3	17
3-4	19
4	21
4-5	23
5	25

The above-mentioned scale evaluates the practical and theoretical parts separately, and their sum gives the total grade of the final exam.
In order to pass the final exam and the final evaluation (including the addition of previously achieved evaluation points during classes), the student must be positively evaluated on both the practical and theoretical parts of the final exam and achieve a minimum of 25 evaluation points (50%).

Grading in the ECTS system is done by absolute distribution, that is, based on the final achievement:
A – 90 - 100% points
B – 75 -89.9 %
C – 60 -74.9 %
D -- 50 - 59.9%
F – 0 - 49.9%

Grades in the ECTS system are translated into a numerical system as follows:
A = excellent (5)
B = very good (4)
C = good (3)
D = sufficient (2)
F = insufficient (1)

Other important information regarding to the course:

Any use of another person's text or other form of author's work, as well as the use of ChatGPT or any other 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 accordin to the Rulebook on disciplinary responsibility of students.

Consultation time: Wednesday at 14:00

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COURSE SCHEDULE (for the academic year 2025/2025)

Date	Lectures (time and place)	Seminars (time and place)	Practicals (time and place)	Instructor
30.09.2025.			P1 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
01.10.2025.	L1 (12:30-13:15) Krešimirova 42			Asst. Prof. Magda Trinajstić Zrinski
01.10.2025.	L2 (13:15-14:00) Krešimirova 42			Asst. Prof. Magda Trinajstić Zrinski
07.10.2025.			P2 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
08.10.2025.	L3 (12:30-13:15) Krešimirova 42			Asst. Prof. Magda Trinajstić Zrinski
08.10.2025.	L4 (13:15-14:00) Krešimirova 42			Asst. Prof. Magda Trinajstić Zrinski
14.10.2025.			P3 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
15.10.2025.	L5 (12:30-13:15) Krešimirova 42			Prof. Stjepan Špalj
15.10.2025.	L6 (13:15-14:00) Krešimirova 42			Prof. Stjepan Špalj
21.10.2025.			P4 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
22.10.2025.		S1 (12:30-13:15) Krešimirova 42		Vjera Perković, DMD, PHD
22.10.2025.		S2 (13:15-14:00) Krešimirova 42		Vjera Perković, DMD, PHD
28.10.2025.			P5 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
29.10.2025.		S3 (12:30-13:15) Krešimirova 42		Asst. Prof. Magda Trinajstić Zrinski
29.10.2025.		S4 (13:15-14:00) Krešimirova 42		Asst. Prof. Magda Trinajstić Zrinski
04.11.2025.			P6 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
05.11.2025.		S5 (12:30-13:15) Krešimirova 42		Prof. Stjepan Špalj

05.11.2025.		S6 (13:15-14:00) Krešimirova 42		Prof. Stjepan Špalj
11.11.2025.			P7 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
12.11.2025.	L7 (12:30-13:15) Krešimirova 42			Asst. Prof. Magda Trinajstić Zrinski
12.11.2025.	L8 (13:15-14:00) Krešimirova 42			Asst. Prof. Magda Trinajstić Zrinski
19.11.2025.	L9 (12:30-13:15) Krešimirova 42			Asst. Prof. Magda Trinajstić Zrinski
19.11.2025.	L10 (13:15-14:00) Krešimirova 42			Asst. Prof. Magda Trinajstić Zrinski
25.11.2025.			P8 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
26.11.2025.	L11(12:30-13:15) Krešimirova 42			Prof. Stjepan Špalj
26.11.2025.	L12 (13:15-14:00) Krešimirova 42			Prof. Stjepan Špalj
02.12.2025.			P9 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
03.12.2025.		S7 (12:30-13:15) Krešimirova 42		Vjera Perković, DMD PhD
03.12.2025.		S8 (13:15-14:00) Krešimirova 42		Vjera Perković, DMD PhD
09.12.2025.			P10 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
10.12.2025.		S9 (12:30-13:15) Krešimirova 42		Prof. Stjepan Špalj
10.12.2025.		S10 (13:15-14:00) Krešimirova 42		Prof. Stjepan Špalj
16.12.2025.			P11 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
17.12.2025.	L13 (12:30-13:15) Krešimirova 42			Prof.dr.sc. Stjepan Špalj
17.12.2025.	L14 (13:15-14:00) Krešimirova 42			Prof.dr.sc. Stjepan Špalj
23.12.2025.			P12 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD

07.01.2026.		S11 (12:30-13:15) Krešimirova 42		Prof. Stjepan Špalj
07.01.2026.		S12 (13:15-14:00) Krešimirova 42		Prof. Stjepan Špalj
13.01.2026.			P13 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
14.01.2026.		S13 (12:30-13:15) Krešimirova 42		Asst. Prof. Magda Trinajstić Zrinski
14.01.2026.		S14 (13:15-14:00) Krešimirova 42		Asst. Prof. Magda Trinajstić Zrinski
20.01.2026.			P14 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
21.01.2026.	L15 (12:30-13:15) Krešimirova 42			Prof. Stjepan Špalj
21.01.2026.		S15 (13:15-14:00) Krešimirova 42		Prof. Stjepan Špalj
24.02.2026.			P15 EF (11:00-14:00) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
24.02.2026.	L16 (13:15-14:00) Krešimirova 40			Asst. Prof. Magda Trinajstić Zrinski
24.02.2026.	L17 (14:00-14:45) Krešimirova 40			Asst. Prof. Magda Trinajstić Zrinski
03.03.2026.			P16 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
03.03.2026.	L18 (13:15-14:00) Krešimirova 40			Prof. Stjepan Špalj
03.03.2026.	L19 (14:00-14:45) Krešimirova 40			Prof. Stjepan Špalj
10.03.2026.			P17 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Badnjević, DMD
10.03.2026.	L20 (13:15-14:00) Krešimirova 40			Asst. Prof. Magda Trinajstić Zrinski
10.03.2026.	L21 (14:00-14:45) Krešimirova 40			Asst. Prof. Magda Trinajstić Zrinski
17.03.2026.			P18 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Badnjević, DMD
17.03.2026.		S16 (13:15-14:00) Krešimirova 40		Vjera Perković, DMD PhD

17.03.2026.		S17 (14:00-14:45) Krešimirova 40		Vjera Perković, DMD PhD
24.03.2026.			P19 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Badnjević, DMD
24.03.2026.		S18 (13:15-14:00) Krešimirova 40		Vjera Perković, DMD PhD
24.03.2026.		S19 (14:00-14:45) Krešimirova 40		Vjera Perković, DMD PhD
31.03.2026.			P20 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Badnjević, DMD
31.03.2026.		S20 (13:15-14:00) Krešimirova 40		Asst. Prof. Magda Trinajstić Zrinski
31.03.2026.		S21 (14:00-14:45) Krešimirova 40		Asst. Prof. Magda Trinajstić Zrinski
07.04.2026.			P21 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Badnjević, DMD
07.04.2026.	L22(13:15-14:00) Krešimirova 40			Prof. Stjepan Špalj
07.04.2026.		S22 (14:00-14:45) Krešimirova 40		Prof. Stjepan Špalj
14.04.2026.			P22 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Tomljanović, DMD
14.04.2026.	L23 (13:15-14:00) Krešimirova 40			Asst. Prof. Magda Trinajstić Zrinski
14.04.2026.		S23 (14:00-14:45) Krešimirova 40		Asst. Prof. Magda Trinajstić Zrinski
21.04.2026.			P23 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Tomljanović, DMD
21.04.2026.	L24 (13:15-14:00) Krešimirova 40			Prof. Stjepan Špalj
21.04.2026.		S24 (14:00-14:45) Krešimirova 40		Prof. Stjepan Špalj
28.04.2026.			P24 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Tomljanović, DMD
28.04.2026.	L25 (13:15-14:00) Krešimirova 40			Asst. Prof. Magda Trinajstić Zrinski
28.04.2026.		S25 (14:00-14:45) Krešimirova 40		Asst. Prof. Magda Trinajstić Zrinski

05.05.2026.			P25 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Tomljanović, DMD
05.05.2026.	L26 (13:15-14:00) Krešimirova 40			Asst. Prof. Magda Trinajstić Zrinski
05.05.2026.	L27 (14:00-14:45) Krešimirova 40			Asst. Prof. Magda Trinajstić Zrinski
12.05.2026.			P26 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Tomljanović, DMD
12.05.2026.		S26 (13:15-14:00) Krešimirova 40		Prof. Stjepan Špalj
12.05.2026.		S27 (14:00-14:45) Krešimirova 40		Prof. Stjepan Špalj
19.05.2026.			P27 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Tomljanović, DMD
19.05.2026.	L28 (13:15-14:00) Krešimirova 40			Prof. Stjepan Špalj
19.05.2026.		S28 (14:00-14:45) Krešimirova 40		Prof. Stjepan Špalj
26.05.2026.			P28 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD Matea Tomljanović, DMD
26.05.2026.	L29 (13:15-14:00) Krešimirova 40			Asst. Prof. Magda Trinajstić Zrinski
26.05.2026.		S29 (14:00-14:45) Krešimirova 40		Asst. Prof. Magda Trinajstić Zrinski
02.06.2026.			P29 EF (10:15-13:15) Krešimirova 40	Asst. Prof. Višnja Katić Doris Šimac Pavičić, DMD. Matea Tomljanović, DMD
02.06.2026.	L30 (13:15-14:00) Krešimirova 40			Prof. Stjepan Špalj
02.06.2026.		S30 (14:00-14:45) Krešimirova 40		Prof. Stjepan Špalj

List of lectures, seminars and practicals:

	LECTURES (Topics)	Teaching hours	Location/Lecture room
L1	Orthodontic history and first examination	1	Krešimirova 42
L2	Public health aspect of malocclusion	1	Krešimirova 42
L3	Dental photography - principles of photographing and editing photographs	1	Krešimirova 42
L4	Analysis of symmetries and asymmetries	1	Krešimirova 42
L5	Anomalies in the number and position of teeth	1	Krešimirova 42
L6	Impacted teeth	1	Krešimirova 42
L7	Crowding	1	Krešimirova 42
L8	Spacing	1	Krešimirova 42
L9	Transverse malocclusions	1	Krešimirova 42
L10	Vertical malocclusions – open and deep bite	1	Krešimirova 42
L11	Class II/1 malocclusion	1	Krešimirova 42
L12	Class II/2 malocclusion	1	Krešimirova 42
L13	Class III malocclusions	1	Krešimirova 42
L14	Congenital anomalies	1	Krešimirova 42
L15	Orthodontic aspect of trauma and tooth extraction	1	Krešimirova 42
L16	Bone biology and physiology of tooth movement	1	Krešimirova 40
L17	Types of tooth movement and nature of orthodontic forces	1	Krešimirova 40
L18	The concept of bony and non-bony anchorage	1	Krešimirova 40
L19	Mechanical principles in orthodontic force control - types of wires (elasticity/plasticity), elastic elements, springs	1	Krešimirova 40
L20	Dentofacial orthopedics - skeletal effects of orthodontic forces	1	Krešimirova 40
L21	Side effects of orthodontic treatment	1	Krešimirova 40
L22	Mechanisms of action and effect of removable appliances (plate, functional)	1	Krešimirova 40
L23	Mechanisms of action and effect of fixed appliances (segmental, continuous)	1	Krešimirova 40
L24	Alveolar envelope - limitations of orthodontic treatment	1	Krešimirova 40
L25	Assessment of the right time to start orthodontic treatment	1	Krešimirova 40
L26	Management of eruption and serial extraction	1	Krešimirova 40
L27	Malocclusions, orthodontic treatment and temporomandibular disorders	1	webinar
L28	Obstructive sleep apnea and orthodontics	1	Krešimirova 40
L29	Orthodontic treatment with aligners	1	Krešimirova 40
L30	Final conversation	1	Krešimirova 40

	Total hours of lectures	30	

	SEMINARS (Topics)	Teaching hours	Location/Lecture room
S1	Oral hygiene protocol in orthodontics and prophylaxis	1	Krešimirova 42
S2	Biological and psychological maturity, patient cooperation during treatment	1	Krešimirova 42
S3	Dental photography in orthodontic diagnostics	1	Krešimirova 42
S4	Functions and parafunctions, functional analysis	1	Krešimirova 42
S5	Analysis of tooth position and occlusion, shape and symmetry of dental arches	1	Krešimirova 42
S6	Tooth size discrepancy and analysis of the curve of Spee	1	Krešimirova 42
S7	Dento-alveolar discrepancy and predictive analyses in mixed dentition	1	Krešimirova 42
S8	Problem-based learning - case studies	1	Krešimirova 42
S9	Problem-based learning - case studies	1	Krešimirova 42
S10	Cephalometric X-ray analysis – definition of points and reference lines, analysis of jaw size and position	1	Krešimirova 42
S11	Cephalometric X-ray analysis of growth pattern, position of incisors and soft tissues	1	Krešimirova 42
S12	Problem-based learning - case studies	1	Krešimirova 42
S13	Assessment of orthodontic treatment needs (clinical indices and quality of life) and treatment planning. Criteria by which the Croatian Health Insurance Fund (HZZO) covers orthodontic treatment	1	Krešimirova 42
S14	Problem-based learning - case studies	1	Krešimirova 42
S15	Problem-based learning - case studies	1	Krešimirova 42
S16	Treatment of non-skeletal problems in children - crossbite and reverse overbite.	1	Krešimirova 40
S17	Treatment of non-skeletal problems in children - bad habits, eruption, space, trauma	1	Krešimirova 40
S18	Extraction treatment and interproximal enamel reduction	1	Krešimirova 40
S19	Treatment of skeletal transverse problems in children	1	Krešimirova 40
S20	Problem-based learning - case studies	1	Krešimirova 40
S21	Problem-based learning - case studies	1	Krešimirova 40
S22	Treatment of class II skeletal problems in children	1	Krešimirova 40
S23	Treatment of class III skeletal problems in children	1	Krešimirova 40

S24	Treatment of combined vertical and sagittal skeletal problems in children	1	Krešimirova 40
S25	Comprehensive treatment with the fixed continuous appliance - bonding of the appliance and the levelling phase	1	Krešimirova 40
S26	Comprehensive treatment with the fixed continuous appliance - guidance phase, intermaxillary elastics	1	Krešimirova 40
S27	Comprehensive treatment with a fixed continuous device - finishing phase, removal of the device, additional periodontal procedures	1	webinar
S28	Retention, changes due to growth and aging, relapse	1	Krešimirova 40
S29	Problem-based learning - case studies	1	Krešimirova 40
S30	Problem-based learning - case studies	1	Krešimirova 40
	Total seminar hours	**30**	

	PRACTICALS (Topics)	Teaching hours	Location/Lecture room
P1-29	Acquiring the skills to recognize and treat malocclusions	39x2	Krešimirova 40
	TOTAL HOURS	**58**	

	FINAL EXAM DATES
1.	12.6.2026.
2.	26.6.2026.
3.	10.7.2026.
4.	12.9.2026.

	Lectures	Seminars	Practicals	Total
Total number	30	30	58	118
On-line	1	1	0	2
Percentage	3%	3%	0%	1.7%