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: Periodontology 1
Course Coordinator: Assoc. Prof. Davor Kuiš, PhD, DMD
Course Collaborators:
Assoc. Prof. Jelena Prpić, PhD, DMD
Zvonimir Kunosić, DMD
Aleksandar Pupovac, DMD
Department: Department of Periodontology
Study program: University Integrated Undergraduate and Graduate Study of Dental Medicine (in English)
Study year: 4th
Academic year: 2024./25.

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.):

Periodontology is divided in two separate courses- Periodontology 1 on the 4th year and Periodontology 2 on the 5th year of study. Periodontology 1 is a preclinical course during which basic knowledge about periodontal tissues, diseases and treatment will be taught to prepare the students to work on patients during Periodontology 2.

The aim of the course is to teach the students the basic terminology, diagnostics, procedures, and elements of professional and personal care for the health of the oral cavity, especially of the periodontal tissues. Furthermore, students will learn about the pathogenesis, progression and treatment of periodontal diseases and their relations to other systemic diseases and health in general.

At the end of the course, students must know the basic histological, anatomical, morphological, and topographical characteristics of periodontal tissues and tissues around implants, as well as the etiopathogenesis of periodontal and peri-implant diseases and their treatment.

Teaching is done in the form of lectures, seminars, and practical exercises. During lectures, students will be taught theoretical knowledge, from basic periodontology to more advanced procedures. During seminars students will work in research groups and will have to prepare a presentation on a given topic and present their conclusions to colleagues and supervisors, followed by a discussion. The practical part of the course will teach the students the principles of nonsurgical periodontal treatment. Supra and subgingival instrumentation will be carried out on jaw models. The aim is to prepare the students for clinical exercises on patients during Periodontology 2.

Krešimirova 40/42 • 51000 Rijeka • CROATIA
Phone : + 385 51 559 200; 559 202, 559 203

Assigned reading:

- Jan Lindhe, Niklaus P. Lang, Thorkild Karring. Clinical Periodontology and Implant Dentistry, 5th edition, Oxford, Blackwell Publishing Ltd., 2008.

Optional/additional reading:

- Michael G. Newman, Henry H. Takei, Fermin A. Carranza. Carranza's Clinical Periodontology, 9th edition, Philadelphia, WB Saunders Co., 2002.
- Herbert F. Wolf, Klaus H. Rateitschak, Edith M. Rateitschak, Thomas M. Hassell. Periodontology. Color atlas of dental medicine, 3rd edition, Stuttgart, Thieme Verlag, 2004
- Selected articles from the Journal of Clinical Periodontology

COURSE TEACHING PLAN:

The list of lectures (with topics and descriptions):

Anatomy of periodontal tissues 1 (gingiva and PDL)
Learning outcomes:
List the periodontal tissues
Describe the basic micro and macro anatomy of periodontal tissues

Soft tissues around teeth and implants
Learning outcomes:
Explain the concept of biological width
Explain the differences in gingival phenotypes
Explain the specifics in the structure of peri-implant mucosa

Anatomy of periodontal tissues 2 (cementum and alveolar bone)
Learning outcomes:
List the periodontal tissues
Describe the basic micro and macro anatomy of periodontal tissues

Edentulous alveolar ridge
Learning outcomes:
Explain the classification of the edentulous alveolar ridge
Explain the changes in the alveolar ridge after tooth extraction

Bone as a tissue
Learning outcomes:
Explain the basic biology of bone tissue (cells, processes, growth factors)
Explain the systemic and local factors that influence the healing of bone

Osteointegration
Learning outcomes:
Define osseointegration
Explain the processes in the bone tissue during implant placement

Krešimirova 40/42 • 51000 Rijeka • CROATIA
Phone : + 385 51 559 200; 559 202, 559 203

Oral biofilms (dental plaque and calculus)
Learning outcomes:
Define biofilm
Explain the formation of dental plaque and its structure
Explain the formation of calculus and its structure

Periodontal and peri-implant infection
Learning outcomes:
Become familiar with historical considerations and theories about the occurrence of periodontal and peri-implant infection
Explain current considerations on periodontal and peri-implant infection
List periodontal pathogens and their basic characteristics
Explain the specifics of biofilm in periodontal infection

Pathogenesis of periodontitis
Learning outcomes:
Explain the difference between healthy and inflamed gingiva
Describe the stages of lesions from healthy gingiva to periodontitis
Describe the basic mechanisms of virulence of periodontal pathogens and host response

Pathogenesis of peri-implantitis
Learning outcomes:
Explain the difference betweeen biofilm formation around teeth and implants
Explain the development of peri-implantitis

Classification of Periodontal and Peri-implant diseases and conditions
Learning outcomes:
Explain the Classification of periodontal diseases and conditions from 2017.
Explain the main differences to the previous classification

Periodontal health, gingival diseases and conditions
Learning outcomes:
Explain periodontal health
Describe the symptoms and characteristics of gingivitis caused by plaque and the basic principles of treatment
Explain the effects of hormones, drugs and systemic diseases on the gingiva

Periodontitis
Learning outcomes:
Explain the stages and grades of periodontitis and the principles of treatment
Explain the main characteristics of necrotizing periodontal diseases and the basic principles of treatment

Other conditions affecting the periodontium
Learning outcomes:
Familiarize yourself with the concept of risk for periodontal diseases
Explain the symptoms and basic characteristics of periodontal abscess and the basic principles of treatment

Explain the connection between pulp disease and periodontal tissues and the basic principles of treatment
Explain mucogingival deformities and conditions - gingival phenotype, gingival recession
Explain contemporary knowledge about the influence of occlusal trauma on periodontal disease

Peri-implant diseases and conditions
Learning outcomes:
Explain peri-implant health
Explain the symptoms and characteristics of mucositis and peri-implantitis and the principles of treatment
Explain the lack of soft and hard tissue around the implant

Treatment planning in patients with periodontal disease
Learning outcomes:
Explain the procedures for diagnosing periodontal disease
Explain the basic principles of periodontal therapy plan
List and explain all phases of periodontal therapy

Systemic phase of periodontal treatment
Learning outcomes:
Explain what is the systemic phase of initial therapy
Explain the influence of modifying factors (diabetes, puberty, pregnancy, menopause, tobacco smoking) on the onset and progression of periodontal disease

Clinical examination of patients with periodontal disease
Learning outcomes:
Explain the specifics of examining a patient with periodontal disease
List and explain periodontal indices

Radiological examination of patients with periodontal disease
Learning outcomes:
Get acquainted with modern radiological diagnostic methods in diagnosing periodontal diseases
Explain the radiological signs of periodontal disease

Clinical examination of implant therapy candidates
Learning outcomes:
Acquaint students with clinical procedures that precede implant therapy

Radiological examination of implant therapy candidates
Learning outcomes:
Acquaint students with modern radiological methods in planning implant therapy with an emphasis on CBCT

Clinical examination of patients with implants
Learning outcomes:
Explain the specifics of examining a patient with implants
Explain the clinical signs and symptoms of mucositis and peri-implantitis
Explain the radiological signs of peri-implantitis

Motivational Interviewing in Periodontics

Learning outcomes:
Acquaint students with the importance of motivating the patient to quit smoking and maintain proper oral hygiene

Mechanical plaque control
Learning outcomes:
List and explain the correct use of means for mechanical plaque control

Chemical plaque control
Learning outcomes:
List and explain the mechanism of action of agents for chemical plaque control with an emphasis on chlorhexidine
Explain the clinical application of CHX

Non- surgical periodontal therapy- supragingival debridement
Learning outcomes:
Explain the principles of non-surgical periodontal therapy
List and explain the use of manual and mechanical instruments for plaque removal with an emphasis on supragingival instrumentation

Non- surgical periodontal therapy- subgingival debridement
Learning outcomes:
Explain the principles of non-surgical periodontal therapy
List and explain the use of manual and mechanical instruments for plaque removal with an emphasis on subgingival instrumentation

Supportive periodontal therapy
Learning outcomes:
Explain reevaluation after the initial therapy
Explain the „recall“ system (intervals, risk assessment) and its importance for the success of the therapy

Recapitulation 1
Students' questions and discussion

Recapitulation 2
Students' questions and discussion

The list of practicals with descriptions:

Preclinical practicals are organized in the form of seminars, seminar papers, workshops, preclinical and clinical exercises.

The following topics are covered during seminars:

- Examination of a healthy periodontium
- Examination of a patient with periodontal disease
- Radiological examination of a periodontal patient
- Examination of implant therapy candidates
- Examination of patients with implants

Krešimirova 40/42 • 51000 Rijeka • CROATIA
Phone : + 385 51 559 200; 559 202, 559 203

• Radiological examination of the implant patient
• Systemic phase of periodontal therapy
• Motivational interview
• Mechanical supragingival plaque control
• Chemical plaque control
• Non-surgical therapy – theoretical basics

During these seminars each group of students will make a seminar paper related to the topics listed above. The topics and the schedule will be given at the beginning of the course to each group.

Students will take part in an iTOP- Individually trained oral prophylaxis workshop, where students learn and practice tooth brushing and interdental hygiene methods themselves.

During preclinical and clinical exercises students will perform non-surgical therapy (instrumentation) on models and will measure periodontal indices on each other.

Students' obligations:

Each student must learn the basics of non-surgical periodontal therapy and instrument at least 10 teeth on a model under supervision.
Each student must be able to implement the knowledge about mechanical control of biofilm to instruct an individual about proper oral hygiene.

Attendance at lectures, seminars and practicals is mandatory A student can miss 30% of classes for health reasons, which is justified by a doctor's excuse. Compensation for practicals is possible with prior agreement with the supervisor. A student that misses more than 30% of classes can not continue the course and can not take the final exam. In such cases the student is graded with an F and 0 ECTS and has to retake the course the following academic year.

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 “Ordinance on studies and studying” of the University of Rijeka.

Students' work will be evaluated during classes and at the final exam. Out of a total of 100 points, a student can obtain 40 points during classes, and 60 points on the final exam.

Student evaluation is done using the ECTS (A-E) and numerical system (1-5). Grading in the ECTS system is carried out by absolute distribution, according to grading criteria.

Of the maximum 40 points that can be obtained during classes, the student must collect a minimum of 25 points to take the final exam. Students who collect less than 40 points will have the opportunity to take one mid-term exam and, if they pass the mid-term exam, they will be able to take the final exam. Students who collect between 25 and 29 points (FX grade category) have the right to take the final exam, which is then considered a remedial exam and is not scored,

Krešimirova 40/42 • 51000 Rijeka • CROATIA
Phone : + 385 51 559 200; 559 202, 559 203

in which case the final grade can only be 2E (50%). Students who collect 24 or less grade points (F grade category) must re-enroll in the course.

The student acquires grade points by actively participating in classes, completing assigned tasks, and taking midterm exams, as follows:

1. Class attendance carries a maximum of 15 points
2. Class activity carries a maximum of 10 points
3. A successfully prepared and presented seminar carries a maximum of 15 points.

Students who have obtained more than 25 points during the course will take the final exam, where they can obtain a maximum of 60 points.

Students who have obtained 25 to 29 points during the course (belonging to the FX category) can take the final exam, but they can only receive a 2E grade.

Students who have obtained less than 25 points during classes do not have the right to take the final exam (they enroll in the course again the following year).

The practical exam carries a maximum of 30 points (10 for scaling on the model, 10 for instructions on oral hygiene and 10 for the assessment of the plaque index). The practical exam is performed on a jaw model. The number of points depends on the successful outcome of the given task. Each part of the practical exam will be evaluated with a minimum of 4 and a maximum of 10 points.

The written exam carries a maximum of 30 points, according to the following:
50-59.9% of correct answers – 5-14 points
60-74.9% of correct answers – 15-19 points
75-89.9% of correct answers – 20-24 points
90-100% correct answers – 25-30 points

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 points
C – 60-74.9 points
D – 50-59.9 points
E – 0-49.9 points

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

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 Faculty of Dental Medicine website and Merlin.

Krešimirova 40/42 • 51000 Rijeka • CROATIA
Phone : + 385 51 559 200; 559 202, 559 203

Any use of someone else'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 indication of the source, is considered a violation of copyright, ethics and academic integrity. It represents a serious violation of student rights, and it is subject to disciplinary measures.

Consultation time: Mondays from 14:00 to 18:00

COURSE SCHEDULE (for the academic year 2024/2025)

Date	Lectures (time and place)	Seminars (time and place)	Practicals (time and place)	Instructor
21. 11. 2024.	L1, 2, 3 (14,30 – 16,45) Krešimirova 40			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
28. 11. 2024.	L4, 5 (14,30 – 16,00) Krešimirova 40			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
5. 12. 2024.	L 6, 7 (14,30 – 16,00) Krešimirova 40			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
12. 12. 2024.	L 8, 9 (14,30 – 16,00) Krešimirova 40			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
19. 12. 2024.	L 10, 11 (14,30 – 16,00) Krešimirova 40			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
online	L12, 13			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
online.	L14, 15			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
online	L 16			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
27. 2. 2025.			P 1- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Davor Kuiš, PhD, DMD
online	L 17			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
6. 3. 2025			P 2- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Jelena Prpić, PhD, DMD
online	L 18			Assoc. Prof. Davor Kuiš, PhD, DMD

				Assoc. Prof. Jelena Prpić, PhD, DMD
13. 3. 2025.			P 3- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Davor Kuiš, PhD, DMD
online	L 19			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
20. 3. 2025.			P 4- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Jelena Prpić, PhD, DMD
online	L 20			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
27.3.2025			P 5- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Davor Kuiš, PhD, DMD
online	L 21			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
3. 4. 2025.			P 6- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Jelena Prpić, PhD, DMD
online	L 22			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
10. 4. 2025.			P 7- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Davor Kuiš, PhD, DMD
online	L 23			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
17. 4. 2025.			P 8- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Jelena Prpić, PhD, DMD
online	L 24			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
24. 4. 2025.			P 9- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Davor Kuiš, PhD, DMD
online	L 25			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
8. 5. 2025.			P 10- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Jelena Prpić, PhD, DMD
online	L 26			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
15. 5. 2025.			P 11- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Davor Kuiš, PhD, DMD

online.	L 27			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
22. 5. 2025.			P 12- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Jelena Prpić, PhD, DMD
online	L 28			Assoc. Prof. Davor Kuiš, PhD, DMD Assoc. Prof. Jelena Prpić, PhD, DMD
29.5.2025			P 13- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Davor Kuiš, PhD, DMD

5.6.2025.			P 14- E+F (14-14.45) Krešimirova 40	Assoc. Prof. Davor Kuiš, PhD, DMD

List of lectures, seminars and practicals:

	LECTURES (Topics)	Teaching hours	Location/Lecture room
L1	Anatomy of periodontal tissues 1 (gingiva and PDL)	1	Krešimirova 40
L2	Soft tissues around teeth and implants	1	Krešimirova 40
L3	Anatomy of periodontal tissues 2 (cementum and alveolar bone)	1	Krešimirova 40
L4	Edentulous alveolar ridge	1	Krešimirova 40
L5	Bone as a tissue	1	Krešimirova 40
L6	Osteointegration	1	Krešimirova 40
L7	Oral biofilms (dental plaque and calculus)	1	Krešimirova 40
L8	Periodontal and peri-implant infection	1	Krešimirova 40
L9	Pathogenesis of periodontitis	1	Krešimirova 40
L10	Pathogenesis of peri-implantitis	1	Krešimirova 40
L11	Classification of Periodontal and Peri-implant diseases and conditions	1	Krešimirova 40
L12	I. Periodontal health, gingival diseases and conditions	1	online
L13	II. Periodontitis	1	online
L14	III. Other conditions affecting the periodontium	1	online
L15	IV. Peri-implant diseases and conditions	1	online
L16	Treatment planning in patients with periodontal disease	1	online
L17	Systemic phase of periodontal treatment	1	online
L18	Clinical examination of patients with periodontal disease	1	online
L19	Radiological examination of patients with periodontal disease	1	online

L20	Clinical examination of implant therapy candidates	1	online
L21	Radiological examination of implant therapy candidates	1	online
L22	Clinical examination of patients with implants	1	online
L23	Motivational Interviewing in Periodontics	1	online
L24	Mechanical plaque control	1	online
L25	Chemical plaque control	1	online
L26	Non- surgical periodontal therapy- supragingival debridement	1	online
L27	Non- surgical periodontal therapy- subgingival debridement	1	online
L28	Supportive periodontal therapy	1	online
L29	Recapitulation 1	1	online
L30	Recapitulation 2	1	online
	TOTAL TEACHING HOURS	**30**	

	PRACTICALS (Topics)	**Teaching hours**	**Location/Lecture room**
P1	iTOP – individually trained oral prophylaxis	2	Krešimirova 40
P2	GBT- Guided biofilm therapy	2	Krešimirova 40
P3	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P4	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P5	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P6	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P7	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P8	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P9	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P10	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P11	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P12	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40

P13	Deep scaling and root planing on models/ Oral hygiene/ Periodontal indices	2	Krešimirova 40
P14	Written exam	2	Krešimirova 40
P15	Practical exam	2	Krešimirova 40
	TOTAL TEACHING HOURS	30	

	FINAL EXAM DATES
1.	12.06.2025.
2.	03.07.2025.
3.	04.09.2025.

	Lectures	**Seminars**	**Practicals**	**Total**
Total number	30	n/a	30	60
On-line	19			19
Percentage	63%			32%