

**DESCRIPTION OF COURSE UNIT FOR DOCTORAL STUDIES
AT VILNIUS UNIVERSITY**

Scientific Area, Field of Science	Medical and Health Sciences (M 000): Odontology (M 002); Public Health (M 004)			
Faculty, Institute, Department/Clinic	Faculty of Medicine Institute of Odontology			
Course unit title (ECTS credits, hours)	Periodontal Disease and Human Health 8 credits (212 hours)			
Study method	Lectures	Seminars	Consultations	Self-study
Number of ECTS credits	-	-	1	7
Method of the assessment (in 10 point system)	<p>Presentation evaluation. Presentation topic should be discussed and decided with the lecturer coordinating the unit. Student should review, analyze, and present the newest research findings that are related to the topic. The following aspects are evaluated:</p> <ul style="list-style-type: none"> - Structure of the presentation, comprehensiveness, and quality of the material (2 points); - Clear presentation of knowledge, argumentation, critical thinking (2 points); - Conclusions and limitations (2 points); - Clinical recommendations, evidence-based statements (2 points); - Discussion, ability to answer questions (2 points). <p>Minimal passing score – 5.</p>			

PURPOSE OF THE COURSE UNIT

The aim of this course unit is to acquaint the student with the etiopathogenesis of periodontal diseases, diagnosis, differential diagnosis, treatment methods and prevention, influence of general human health on the manifestation of marginal and apical periodontal diseases and the influence of periodontal diseases on the manifestation of systemic pathology in the human body.

THE MAIN TOPICS OF THE COURSE UNIT

Periodontal health, gingival diseases and conditions. Diagnostic criteria for healthy gingival and periodontal tissues. Gingivitis. Dental biofilm-induced, non-dental biofilm-induced. Periodontitis. Necrotizing periodontal diseases. Periodontitis as a manifestation of systemic disease. Manifestation of systemic diseases and developmental and acquired conditions in periodontal tissues. Systemic diseases or conditions affecting the periodontal supporting tissues. Periodontal abscesses and endodontic-periodontal lesions. Diseases and conditions of tissues surrounding the implant. Peri-implant infection. Peri-implant-mucositis. Peri-implantitis. Conservative and surgical treatment of peri-implant diseases. Prevention of peri-implant diseases. Etiology of periodontal diseases. The role of microorganisms in the development of periodontal and peri-implant diseases. Examination of a periodontal patient. Radiological examination and radiological diagnostics of marginal periodontium. Periodontal treatment plan. Conservative periodontal treatment. Periodontal surgery. Modern methods of treating periodontal diseases and restoring periodontal tissues. Supportive periodontal treatment. Individual and professional periodontal care of patients with special needs. Risk factors for periodontal disease. Assessment of the risk of recurrence of periodontal diseases. Prevention of periodontal diseases. Personal oral care, methods, tools.

Chemical control of biofilm. Periodontal disease treatment prognosis. Periodontal diseases in children.

Functional anatomy of the masticatory system, treatment planning, treatment methods and principles. Prosthetics.

The infectious etiological factor of apical periodontitis. Pathways of the spread of endodontic infection to the surrounding tissues in the root apex region. Features and differences of root canal infection in endodontically treated and retreated teeth. Extraradicular infection and its features during periapical pathology.

Etiopathogenesis of apical periodontitis and its features. Symptomatic and asymptomatic apical periodontitis. Apical abscess. Symptomatic apical periodontitis with periostitis. Asymptomatic apical periodontitis with a sinus tract.

Principles of emergency treatment in symptomatic apical periodontitis, symptomatic apical periodontitis with periostitis, and apical abscess. Selection and use of non-steroidal anti-inflammatory (NSAIDs) and antibacterial medications.

Outcome and prognosis of endodontic treatment in teeth with apical periodontitis. Periapical pathology and systemic human diseases: infectious endocarditis, kidney pathology, diabetes, cardiovascular diseases, AIDS, etc., physiological and pathological pregnancy, respiratory system pathology.

Relationships of inflammation of the maxillary sinus with the pathology of the apical surrounding tissues in the area of maxillary molars and premolars.

Stressful situations and their reflection in the neuromuscular system of the face: the origin of pain, reflecting toothache.

The impact of diseases related to immune system changes on endodontic treatment outcome and prognosis.

Peculiarities of periodontal and endodontic treatment of patients using bisphosphonates.

Antibiotic prophylaxis in patients with pathology of the cardiovascular system: infective endocarditis, artificial heart valves, etc. Treatment with antibacterial and anti-inflammatory drugs.

RECOMMENDED LITERATURE SOURCES

1. Carranzas Clinical periodontology, 13 edition, By Michael Newman, Henry Takei, Perry Klokkevold, Fermin Carranza ODONT 2018, pp.1004.
2. Lindhe's Clinical Periodontology and Implant Dentistry, 2 Volume Set, 7th Edition Niklaus P. Lang, Tord Berglundh, William V. Giannobile. Wiley-Blackwell, 2021, p.p.1376.
3. G. Baniulyte, K. Ali, and L. Burns. Guided tissue regeneration techniques involving blood-derived products in periradicular surgery: a systematic review and meta-analysis protocol. *JBI.Evid.Synth.* 19 (12):3378-3383, 2021.
4. S. N. Papageorgiou, G. N. Antonoglou, D. Michelogiannakis, L. Kakali, T. Eliades, and P. Madianos. Effect of periodontal-orthodontic treatment of teeth with pathological tooth flaring, drifting, and elongation in patients with severe periodontitis: A systematic review with meta-analysis. *J.Clin.Periodontol.*, 2021.
5. L. Xiao, K. Karapen, S. Dong, H. Yang, and X. Zhang. Epidemiology of periodontal disease in adolescents in mainland China, 1983-2020: a systematic review and meta-analysis. *Ann.Palliat.Med.* 10 (1):45-60, 2021.
6. V. F. Zymperdikas, M. P. Yavropoulou, E. G. Kaklamanos, and M. A. Papadopoulos. Bisphosphonates as Supplement to Dental Treatment: A Network Meta-Analysis. *J.Dent.Res.* 100 (4):341-351, 2021.
7. Q. A. Le, G. D. Eslick, K. M. Coulton, R. Akhter, S. Lain, N. Nassar, A. Yaacoub, G. Condous, M. Leonardi, J. Eberhard, and R. Nanan. Differential impact of periodontal treatment strategies during pregnancy on perinatal outcomes. A systematic review and meta-analysis. *J.Evid.Based.Dent.Pract.* 22 (1):101666, 2022.
8. Periodonto ligos: periodontologinių ligonių dantų protezavimas ir ortodontinis gydymas. A. Pūrienė, R. Savickas. 2006.

9. Žekonienė J, Ivanauskaitė D, Pūrienė A. Kraštinis periodontas ir jo patologija // Vilnius: UAB „Progretus“, 2008. 197 p.
10. Brukienė V, Šinkūnaitė L, Pūrienė A, Linkevičienė L. Neįgaliųjų ir pacientų su specialiosiomis reikmėmis odontologinė priežiūra // Vilnius: UAB „Progretus“, 2008, p. 85-9,
11. Mahmoud Torabinejad, Richard E Walton, Ashraf F. Fouad. Endodontics: Principles and Practice, 6th ed. 2021, Elsevier Inc. <https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20170033025>.
12. Igor Tsesis, Carlos E. Nemcovsky, Joseph Nissan, Eyal Rosen. Endodontic-Periodontal Lesions. 2019, Springer Cham. <https://doi.org/10.1007/978-3-030-10725-3>.
13. Nadia Chugal, Louis M Lin. Endodontic Prognosis. Clinical Guide for Optimal Treatment Outcome. 2017, Springer Cham. <https://doi.org/10.1007/978-3-319-42412-5>.
14. Henry F. Duncan, Paul Roy Cooper. Clinical Approaches in Endodontic Regeneration. Current and Emerging Therapeutic Perspectives. 2019, Springer Cham. <https://doi.org/10.1007/978-3-319-96848-3>.
15. Louis H. Berman, Kenneth M. Hargreaves. Cohen's Pathways of the Pulp. 12th Edition. 2021, Elsevier Inc. <https://www.elsevier.com/books/cohens-pathways-of-the-pulp/berman/978-0-323-67303-7>.
16. V. Pečiulienė, R. Manelienė, S. Drukteinis. Endodontinis pergydymas: klinikiniai ir farmakologiniai aspektai. 2015, Vilnius, VU leidykla. <https://www.knygynas.vu.lt/endodontinis-pergydymas-klinikiniai-ir-farmakologiniai-aspektai-1>.

CONSULTING LECTURERS

1. Coordinating lecturer: Alina Puriene (Prof. Dr. HP).
2. Vilma Brukiene (Prof. Dr.).
3. Vygantas Rutkunas (Prof. Dr.).
4. Saulius Drukteinis (Assoc. Prof. Dr.).
5. Linas Zaleckas (Assoc. Prof. Dr.).

APPROVED:

By Council of Doctoral School of Medicine and Health Sciences at Vilnius University:
29th of September 2022

Chairperson of the Board: Prof. Janina Tutkuvienė