

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

<b>Scientific Area/eas, Field/ds of Science</b>	Medical and Health Sciences (M 000): Odontology (M 002)			
<b>Faculty, Institute, Department/Clinic</b>	Faculty of Medicine Institute of Odontology			
<b>Course unit title (ECTS credits, hours)</b>	<b>Diseases of Dental Pulp and Apical Periodontal Tissues</b> 7 credits (186 hours)			
<b>Study method</b>	Lectures	Seminars	Consultations	Self-study
Number of ECTS credits	-	1	1	5
<b>Method of the assessment (in 10 point system)</b>	<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"> <li>- Structure of the presentation, comprehensiveness, and quality of the material (2 points);</li> <li>- Clear presentation of knowledge, argumentation, critical thinking (2 points);</li> <li>- Conclusions and limitations (2 points);</li> <li>- Clinical recommendations, evidence-based statements (2 points);</li> <li>- Discussion, ability to answer questions (2 points).</li> </ul> <p>Minimal passing score – 5.</p>			
<b>PURPOSE OF THE COURSE UNIT</b>				
To gain knowledge about the novel scientific findings of the etiology, diagnosis, principles of treatment and prevention of pulpal and apical periodontal tissue diseases.				
<b>THE MAIN TOPICS OF THE COURSE UNIT</b>				
<ol style="list-style-type: none"> <li>1. Anatomy, histology, embryology, changes of the dental pulp and apical periodontal tissues. Anatomical features of upper and lower jaw teeth, microbiological aspects of pulp and apical periodontal tissue diseases.</li> <li>2. Examination of the patient, diagnostic procedures and methods. Principles of classification of pulpal and apical periodontal tissue diseases. Differential diagnosis of pulp and apical periodontal tissue diseases. Endodontic radiology, principles of its application in endodontics.</li> <li>3. Hand and engine-driven endodontic instruments. Ultrasonic instruments, principles of use.</li> <li>4. Bioceramic materials, their properties, principles of use.</li> <li>5. Rational use of antibacterial and anti-inflammatory drugs in the treatment of pathology of the pulp and apical periodontal tissues. Principles of effective analgesia.</li> <li>6. Endodontic treatment of patients with systematic diseases. Principles of prevention of infective endocarditis.</li> <li>7. Peculiarities of anatomy of primary teeth, treatment methods and use of materials during endodontic treatment, psychological principles of working with children.</li> <li>8. Principles of selection of teeth for endodontic retreatment procedures due to the type of tooth crown, root canal filling, primary diagnosis of the tooth.</li> <li>9. Factors having impact on the prognosis of endodontic treatment and/or retreatment procedures.</li> </ol>				

10. Surgical endodontics: indications and contraindications, treatment principles, instruments and methods of procedure. Endodontic treatment or implant placement. Indications for the choose of different treatment methods.
11. Endodontic/periodontal pathology: classification of lesions, diagnosis, differential diagnosis, treatment features.
12. Main principles of prosthetic restoration of endodontically treated teeth: functional anatomy of the masticatory system, treatment planning, treatment methods and principles.

#### **RECOMMENDED LITERATURE SOURCES**

1. Cohen S, Hargreaves KM, eds. Pathways of the pulp, 12th ed. St. Louis: Mosby, 2021 (Clinicalkey duomenų bazė).
2. Regenerative Endodontics: Burning Questions Anthony J. Smith, PhD, and Paul R. Cooper, PhD Endod 2017;43:S1-S6
3. Hengameh Bakhtiar, Amir Mazidi, Saeed Mohammadi Asl, M. R. Ellini, · A. Moshiri, M. H. Nekoofar, P. M. H. Dummer. The role of stem cell therapy in regeneration of dentine-pulp complex: a systematic review Progress in Biomaterials (2018) 7:249-268
4. Koli ir kt. Combination of Nonsurgical Endodontic and Vital Pulp Therapy for Management of Mature Permanent Mandibular Molar Teeth with Symptomatic Irreversible Pulpitis and Apical Periodontitis JOE, Volume 47, Number 3, March 2021
5. Edwin Chang ir kt. Cone-beam Computed Tomography for Detecting Vertical Root Fractures in Endodontically Treated Teeth: A Systematic Review J Endod 2016;42:177-185.
6. PradeepKumar et al Diagnosis of Vertical Root Fractures by Cone-beam Computed Tomography in Root-filled Teeth with Confirmation by Direct Visualization: A Systematic Review and Meta-Analysis. JOE Volume 47, Number 8, August 2021
7. Rivera E. ir kt. Longitudinal tooth cracks and fractures: an update and review. Endodontic Topics 2015, 33, 14-42
8. European Society of Endodontology developed by: Mannocci F. Ir kt. European Society of Endodontology position statement: The restoration of root filled teeth *Int Endod J.* 2021;54:1974-198.
9. Careedu R. ir kt.. A prospective clinical study investigating the effectiveness of partial pulpotomy after relating preoperative symptoms to a new and established classification of pulpitis. *Int Endod J.* 2021;54:2156-2172.

#### **CONSULTING LECTURERS**

1. Coordinating lecturer: Vytautė Pečiulienė (Prof. Dr.).
2. Saulius Drukteinis (Assoc. Prof. Dr.).
3. Vilma Brukiene (Prof. Dr.).
4. Rasmute Maneliene (Assoc. Prof. Dr.).

#### **APPROVED:**

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

Chairperson of the Board: Prof. Janina Tutkuvienė