

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

Scientific Area, Field of Science	Medical and Health Sciences (M 000): Odontology (M 002), Medicine (M 001)			
Faculty, Institute, Department/Clinic	Faculty of Medicine Institute of Odontology			
Course unit title (ECTS credits, hours)	Traumatic Dental and Maxillofacial Injuries 8 credits (212 hours)			
Study method	Lectures	Seminars	Consultations	Self-study
Number of ECTS credits	-	1	1	6
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				
Get to expand the knowledge in the classification, epidemiology, principles of diagnostics, emergency aid and treatment of injuries to the teeth, jaws and face.				
THE MAIN TOPICS OF THE COURSE UNIT				
<ol style="list-style-type: none"> 1. Classification and epidemiology of traumatic dental injuries. General principles of dental trauma diagnosis and treatment planning. 2. Apexogenesis and apexification. Indications, contraindications. A new approach in apexogenesis in teeth with necrotic pulp. 3. Regenerative procedures in the treatment of traumatic dental injuries. Revascularization process. Use of stem cells in pulp regeneration processes. 4. Injuries to the hard dental tissues, their types, principles of diagnosis and treatment. Crown fractures: clinical and radiological features. Direct pulp capping and pulpotomy: indications, contraindications, treatment techniques. Crown-root fractures: clinical and radiological signs, treatment methods (removal of the fragment, exposure of the fracture area, orthodontic and surgical extrusion of the apical fragment). Root fractures, clinical and radiological signs. Types of root fracture healing. Primary methods of treatment. Monitoring, complications, and prognosis of dental hard tissue lesions. Properties of materials used during the pulp capping procedure and aspects of clinical use. 5. Traumatic injuries to the periodontal tissues. Tooth concussion and subluxation: clinical and radiological signs, differential diagnosis, treatment principles, and methods. Lateral tooth luxation: clinical and radiological signs, differential diagnosis. Principles of tooth restoration and treatment, main methods. Partial extrusion and intrusion of a tooth: clinical and radiological signs, differential diagnosis. Principles and main methods of tooth restoration. Tooth avulsion: clinical 				

and radiological signs. First aid in case of avulsions. Principles and basic techniques of tooth replantation and further treatment principles. Monitoring of case.

6. Complications of traumatic dental injuries. Resorptions, their etiopathogenesis, diagnostic and treatment features.

7. Etiology of facial soft tissue injuries; clinical manifestation of injuries to individual maxillofacial areas and organs; characteristics of wounds; first aid in case of wounds; primary surgical repair of wounds, its stages; prevention of tetanus and other infections; secondary sutures; treatment of infected wounds; antibiotic therapy; complications of facial soft tissue injuries, prevention of complications, consequences, rehabilitation. The wound healing process and factors influencing it; phases of wound healing, scar formation; surgical sutures and their selection, types of surgical sutures, correct technique of performing sutures in the facial area; timing of suture removal and factors affecting them

8. Etiology and clinical manifestation of dislocations and fractures of the mandible; first aid in cases of mandible injuries, treatment of mandible injuries, consequences, rehabilitation; indications for conservative and surgical treatment, advantages and disadvantages of various treatment methods, surgical methods. Etiology, clinical appearance, and first aid of fractures of the middle third of the face (maxilla, zygoma, orbita walls, nasoethmoid complex); treatment, consequences, rehabilitation of bone fractures of the middle part of the face; indications for conservative and surgical treatment; advantages and disadvantages of various treatment methods; immobilization time, surgical methods.

9. Combined facial injuries: etiology, clinic, first aid in their cases; treatment, consequences, rehabilitation of combined facial injuries; indications for conservative and surgical treatment, advantages and disadvantages of various treatment methods. Clinic and treatment of anaphylactic shock; traumatic injuries of nerves and large blood vessels; complications of facial injuries and their prevention.

10. Injuries of children's soft tissues, facial bones, and teeth: characteristics of injuries in children's age; features of treatment and healing of wounds and bone fractures in childhood; first aid in cases of facial bone fractures in children; indications for conservative and surgical treatment; Peculiarities of surgery in children's age.

RECOMMENDED LITERATURE SOURCES

1. Krastl G, Weiger R, Filippi A, Van Waes H, Ebeleseder K, Ree M, Connert T, Widbilller M, Tja€derhane L, Dummer PMH, Galler K. Endodontic management of traumatized permanent teeth: a comprehensive review. *International Endodontic Journal*, 54, 1221–1245, 2021.
2. Andreasen JO, Andreasen FM, Andersson L, eds. *Textbook and Colour Atlas of Traumatic Injuries to the Teeth*, 5th edn. Copenhagen: Blackwell-Munksgaard, 2014.
3. Cohen S, Hargreaves KM, eds. *Pathways of the pulp*, 12th ed. St. Louis: Mosby, 2021. (Clinicalkey duomenų bazė).
4. Luciana Batista Luz ir kt..The Impact of Cone-beam Computed Tomography on Diagnostic Thinking, Treatment Option, and Confidence in Dental Trauma Cases: A Before and After Study *JOE*, Volume 48, Number 3, March 2022
5. Markus Haapasalo ir kt..Clinical use of bioceramic materials *Endodontic Topics* 2015, 32, 97–117.
6. Leif K. Bakland & Jens Ove Andreasen Biological considerations in the management of traumatic dental injuries. *Endodontic Topics* 2014, 30, 44–50.
7. Steffano Petti, Ulf Glendor, LarsAndersson. World traumatic dental injury prevalence and incidence, a meta-analysis—Onebillionlivingpeoplehavehadtraumatic dental injuries. *Dental Traumatology*. 2018;34:71–86.

8. S. Patel, F. Foschi, F. Mannocci & K. Pate External cervical resorption: a three-dimensional classification International Endodontic Journal, 51, 206–214, 2018.
9. Maxillofacial Trauma: A Clinical Guide Akhilesh Kumar Singh (Ed.), Naresh Kumar Sharma (Ed.) Springer; 1st ed. 2021 edition (May 3, 2021), 481 p.
10. Atlas of Operative Maxillofacial Trauma Surgery: Primary Repair of Facial Injuries 2014th Edition. By Michael Perry (Ed.), Simon Holmes (Ed.), 842 p.
11. Maxillofacial Trauma and Esthetic Facial Reconstruction 2nd Edition by P.Ward Booth, B, Eppley, R. Schmelzeisen, Saunders; 2nd edition (2011), 640 p.
12. Oral and Maxillofacial Trauma, 4e 4th Edition. Raymond J. Fonseca, H. Dexter Barber, M.P. Powers, D.E. Frost. Elsevier, 2013, 912 p.
13. Management of Complications in Oral and Maxillofacial Surgery / Edition 1. M. Miloro, A. Kolokythas. Wiley, 2012, 866 p.

CONSULTING LECTURERS

1. Coordinating lecturer: Vytautė Pečiulienė (Prof. Dr.).

2. Linas Zaleckas (Assoc. Prof. Dr.).

3. Saulius Drukteinis (Assoc. Prof. Dr.).

4. Vilma Brukienė (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