**Study program:** Integrated academic studies of dentistry

Type and level of the study program: Integrated academic studies

**Course title: Operative dentistry - preclinical (DII-OPDPC)** 

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**Course status:** Compulsory

ECTS Credits: 8
Condition: Dental anatomy

## Course aim

Acquisition of basic knowledge and skills related to dental pathology of dental hard tissues, diagnostic and therapeutic procedures for restoration of dental crown.

## **Expected outcome of the course:**

Biology of pulpo-dentine complex and its reaction to diverse stimuli. Etiopathogenesis of caries, diagnosis and classification of carious lesions, principles cavity preparation, principles of restoration of dental crowns, materials for temporary and final reconstruction of dental crowns and accompanying instruments to work. With the knowledge of the materials for temporary and final reconstruction of the tooth crown as well as information on safety and hormonal substrates.

- Conquering the way to access patient and techniques
- Mastering the practical application of hand and mechanical instruments
- Mastering the skills of cavity preparation
- Conquering the principles of dental crown reconstruction with adequate instruments for
- Adoption of the method of preparation and application of materials for temporary and definitive closure of the cavity and
- application of protective and medicament base.

## **Course description**

Theoretical education

1. Biology of the pulp - dentin complex (composition and morphology of enamel, dentin and cement structure the pulp). 2. The reaction of pulp and dentin in preparation and restorative materials. Dental plaque. 3. Dental caries (etiology, pathogenesis, histopathology of caries of enamel, dentin and cement. Classification of cavities. Deep cavities. Macroscopic appearance of carious lesions, diagnosis, prevention and therapy selection procedures. Caries predilection and caries immune localizations. 3. Non-carious disorder of hard tooth tissue (abrasion, attrition, erosion, bruxism, tooth fracture). 4. Dental records, preparation for restorative surgery (dry working field). Equipment and instruments in restorative procedure transparency. Clinical techniques for caries removal. Matrix. Polishing of direct restorations. Separation of teeth. 5. Application of basic Black's principles in restorative dentistry. Cavity preparation for amalgam restorations (I, II, MOD, V). 6. Cavity preparation for restorative esthetic fillings (I - V) classes. 7. Cavity preparation for the direct and indirect composite veneers. 8. Materials for temporary cavity closure. 9. Materials for lining and protection of the pulp - dentin complex. 10. Adhesive in restorative dentistry. 11. Glass ionomere cements. 12. Composite materials. 13. Amalgams

Practical education: exercises, other forms of education, research related activities

1. Introduction to the topics and methodology of exercises. 2. Histomorphological structure of dental tissues, enamel caries, dentin and cement. 2. Working place, dental chairs, handpieces, working instruments, drilling burs. 3. Position of the therapist during work, direct and indirect work. 3. Dry working field. 4. Black's principles and deviation from Black's principles. 5. Preparation of class I cavity on the occlusal surface of the premolars. 6. Preparation of class I cavity on the occlusal surface of the molars. 7. Preparation of class I cavity on the - foramen coecum, foramen molare. 8. Preparation of class II cavities – classic for amalgam, slot, tunnel. 9. Preparation of MOD cavities in teeth with vital pulp. 10. MOD cavity preparation in endodontically treated teeth. 11. Preparation of class III cavity. 12. Preparation of class IV cavity. 13. Preparation of class V cavity. 14. Cavity preparation for indirect restoration and facets. 15. Instrumentation for setting temporary and definitive restorations, matrices, polishers. 16. Materials for temporary closure - theory and application. 17. Protective and medicamentous bases - theory and application. 18. Glass ionomer cements - theory and application. 19. Placing of single-surface composite restorations in anterior teeth. 22. Composite sandwich technique. 23. Placing of single-surface amalgam fillings. 24. Placing of two or multi- surface amalgam fillings Finishing and polishing of amalgam fillings. 25. Placing MOD amalgam fillings on endodontically treated tooth. Finishing and polishing of the fillings. 26. Practicing the acquired skills

## Literature

Compulsory

Outlines of lectures

Additional -

Number of active classes					Other:
		Other ty	pes of teaching:	Research related activities:	7
30	75				
Teaching methods	: Theoretical, practi	ical and Collog	uium.		
		Stud	ent activity assessmer	nt (maximally 100 points)	
Pre-exam activities			points	Final exam	points
Lectures			10	Written	20
Practices			10	Oral	40
Colloquium			20		
Essay					