

## **LECTURE COURSE 3<sup>RD</sup> COURSE, 6<sup>TH</sup> TERM**

**Lecture: Thursday 09:45 – 11:15 5<sup>th</sup> dental hall**

**Lecturer: Assoc. Prof. Dr.E. Boteva, PhD**

**Lecturer assistant: Assist. Prof. Dr. D. Karayasheva, PhD**

**27.02.2025– Assoc. Prof. Dr. E. Boteva, PhD**

Root canal treatment. Types of root canal content. Working length - methods of determination. Cleaning, shaping and irrigation of the root canals. Requirements for the design of the root canal preparation. Endodontic instruments for hand use – types, standardization, working motions.

**06.03.2025– Assoc. Prof. Dr. E. Boteva, PhD**

Hand instrumentation techniques for root canal preparation: standard technique, step back technique, crown down technique.

**13.03.2025– Assoc. Prof. Dr. E. Boteva, PhD**

Root canal irrigation – chemical and medicinal agents. Mechanism of action, method of use. Irrigation protocol in daily practice.

**20.03.2025– Assoc. Prof. Dr. S. Yantcheva, PhD**

Nickel-titanium endodontic instruments – advantages and disadvantages. Physicochemical characteristics of the nickel-titanium alloy. Types of nickel-titanium root canal shaping systems.

**27.03.2025– Assoc. Prof. Dr. S. Yantcheva, PhD**

Basic working principles of engine-driven nickel-titanium shaping systems – characteristics, working protocol.

**03.04.2025– Assoc. Prof. Dr. E. Boteva, PhD**

Obturation of the root canals – fundamentals, main types of root canal filling materials – advantages and disadvantages. Root canal obturation techniques: single-cone technique, cold lateral condensation – instrumentation and procedure.

**10.04.2025– Assoc. Prof. Dr. E. Boteva, PhD**

Criteria for assessment of root canal treatment outcome. Errors during the endodontic treatment. Basic steps in retreatment and removal of root canal filling materials.

**17.04.2025– Assoc. Prof. Dr. S. Yantcheva, PhD**

Radicular posts – indications, biomechanics. Types. Selection. Method of application.

**24.04.2025– Assoc. Prof. Dr. S. Yantcheva, PhD**

Etiology and pathogenesis of dental caries – contemporary theories. Anatomy and physiology of enamel and dentin. Age-related changes. Zones in the enamel and the dentin. Topographic classification of caries lesions. Basic examination methods.

**08.05.2025– Assoc. Prof. Dr. E. Boteva, PhD**

Basic guidelines for caries prevention in adult patients. Caries-risk assessment.

**15.05.2025– Assoc. Prof. Dr. E. Boteva, PhD**

Anatomy and physiology of the dental pulp. Physiological age-related changes in the dental pulp. Etiology and pathogenesis of inflammatory diseases of the dental pulp. Classification. Main symptoms. Basic diagnostic and treatment methods.

**22.05.2025– Assoc. Prof. Dr. E. Boteva, PhD**

Anatomy and physiology of the periodontium. Physiological age-related changes. Etiology and pathogenesis of inflammatory diseases of the apical periodontium. Classification. Main symptoms. Basic diagnostic and treatment methods.

**29.05.2025– Assoc. Prof. Dr. E. Boteva, PhD**

Asepsis and antisepsis in conservative dentistry. Protection from infectious diseases. Basic methods and remedies for premedication and anesthesia in conservative dentistry.

**05.06.2025– Assoc. Prof. Dr. S. Yantcheva, PhD**

Isolation of the operative field and preparation of the patient for conservative dentistry treatment.

**Final test.**

**Program of seminars  
III course, VI semester**

**24<sup>th</sup> March – 28<sup>th</sup> March**

1. Endodontic access cavity – purpose. Factors affecting the position of the endodontic access cavity. Instruments, used for endodontic access cavity preparation and pulp chamber shaping. Basic configurations of the endodontic access cavities for incisors, canines, molars and premolars. Age differences in endodontic access cavities. Number and position of the orifices of root canals. Prevention of crown discoloration after endodontic treatment.

**12<sup>th</sup> April – 16<sup>th</sup> April**

2. Step-back technique for cleaning and shaping of root canals. Instruments. Essence, purpose and sequence of the manipulations used for removing the root canal contents. Working length determination. Root canal cleaning and shaping.  
Obturation of root canals with cold lateral condensation. Criteria for determining the adequacy of canal preparation before obturation. Master cone and endodontic spreader selection. Objective control of the obturating manipulations. Preparation and placement of the root canal sealer – paste-like root canal filling material, cold lateral condensation, accessory cones. Assessment of the root canal filling quality.

**Head of Department  
„Conservative Dentistry”  
Assoc. Prof. Dr. S. Yantcheva, PhD**

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