

Preclinical periodontology

The second course year

Introduction to the classes

Classes (5 x 3 hours classes in simulated conditions and 2 x 3 hours clinical training)

- 1 Construction of manual and electric toothbrushes, methods of toothbrushing, manual vs. electric toothbrushes, interdental cleaning methods, adjunctive oral hygiene aids, importance of instruction and motivation in mechanical plaque control, dentifrices- formulation and clinical use, oral hygiene TIPPS (talk, instruct, practise, plan and support).
- 2 Hand instruments in periodontal treatment, ergonomics in supra- and subgingival instrumentations, proper finger rest, held and working position of curettes, sharpening instruments used in scaling.
- 3 Selection of periodontal Gracey and universal curettes, principles of clinical work with curettes for subgingival debridement/scaling.
- 4 Sonic and ultrasonic instruments- principles of operation and technique of clinical work, types of working tips in scaling and root planning, advantages and disadvantages of manual curettes vs. sonic and ultrasonic instruments. Supra- and subgingival air polishing, types of powders.
- 5 Basic periodontal examination. Periodontal probes. Periodontal chart. Risks related to periodontal procedures- bioaerosol, post-exposure prophylaxis, cross contaminations.
- 6 Clinical periodontal examination- assessment of oral hygiene status and gingivitis, assessment of probing pocket depth, probing attachment level, gingival recessions and furcation involvement, assessment of tooth mobility and muco-gingival complex, periodontal chart in clinical practice.
- 7 Dental biofilms and dental calculus- formation and clinical implications.

Seminars

1. Morphology, histology and physiology of periodontal tissues.
2. Dental biofilms- mechanism of formation and significance in periodontal and systemic diseases. Dental calculus- formation and significance in periodontal diseases.
3. Periodontal prevention. Mechanical and chemical dental biofilm control. Active agents for chemical biofilm control, delivery formats.
4. Principles of basic periodontal instrumentation- scaling and root planing (SRP) and root surface debridement (RSD)
5. Clinical periodontal examination. Periodontal indices.

Practical classes

Classes in simulated conditions

1. Oral hygiene instruction in phantoms- methods of toothbrushing and interdental cleaning, plaque test. Cleansing and polishing of acrylic teeth in phantoms (2 quadrants).
2. Construction of periodontal hand instruments. Removal of artificial supragingival calculus with sickles in the anterior and lateral in the anterior and lateral part of the lower and upper jaw in phantoms (2 quadrants). Sharpening the curettes with stones.
3. Types and construction of area-specific and universal curettes. Principles of working with Gracey and Langer curettes. Manual SRP procedure in four quadrants of the lower and upper jaw in phantoms.
4. Machine scalers - types, working technique, types of tips for scaling and root planning, air-polishing- working technique, types of powders. Supragingival ultrasonic scaling in one quadrant in the phantom, ultrasonic RSD in two quadrants in the phantom, air-polishing supragingival deposits in one quadrant in phantoms.
5. Periodontal probs. Measurements on phantoms - PD, CAL, REC, F (practical credit). Periodontal chart- overview of periodontal chart using in manual and automated probing.

Clinical classes

6. Clinical periodontal examination - assessment of oral hygiene and gingival inflammation, PD, CAL, REC, F, examination of mobility of teeth and muco-gingival complex, practical filling of periodontal chart in student colleagues.
7. Removal of supragingival deposits - manual, machine and supragingival air-polishing in student colleagues.

The course is part of the preclinical dentistry exam after the second year – practical part of the preOSCE exam – 1 station (periodontal instruments and work ergonomics or periodontal procedures in simulated conditions or diagnostic measurements on phantoms, theoretical part – test questions.

Recommended literature

1. A. Drożdżik: Basic periodontal procedures. Czelej, Lublin, 2025.
2. Gehring JS., Sroda R., Saccuzzo D.: Fundamentals of periodontal instrumentation and advanced root instrumentation. 8th edition, Wolters Kluwert, Philadelphia, 2017.
3. George MD., Donley TG., Preshaw PM.: Ultrasonic periodontal debridement: theory and technique. First ed., John Wiley & Sons, New York, 2014.