



MEDICAL UNIVERSITY
„Prof. Dr. Paraskev Stoyanov“- Varna

FACULTY OF DENTAL MEDICINE

approved by the Faculty Council with a Protocol No. 2/2026

DEAN of Faculty of Dental Medicine
/Assoc. Prof. Georgi Papanchev PhD/



TUITION PROGRAM
OF PRE-CLINICS OF PEDIATRIC DENTISTRY

Speciality: Dental Medicine

Discipline: Mandatory

Educational degree: Master

Qualification degree: Dental Medicine Doctor

type of classes	semester	curriculum – academic hours weekly	curriculum – academic hours overall
lecture classes	IV,V	1/1	30
practical classes	IV,V	1/1	30
academic hours overall			60
control examinations	current control		exam is held during the 5 th semester exams' session
credits (ECTS)	4 (2+2)		4

Varna

2026

ANNOTATION

The course "Propaedeutics of Pediatric Dentistry" offers an opportunity to acquire foundational knowledge regarding the histogenesis, morphology, and physiology of oral structures; the dynamics of tooth development; anomalies in the morphology and structure of teeth; oral physiology; the oral ecosystem; and protective mechanisms during childhood.

This knowledge forms the basis for developing competencies necessary for the comprehensive organization and implementation of oral disease prevention in childhood, as studied in the relevant discipline. Additionally, it provides the competencies required to appropriately select treatment methods for pediatric dental care.

Participants will gain an in-depth understanding of the histogenesis, morphology, and physiology of oral structures, as well as a thorough understanding of the primary physiological processes occurring within the oral cavity.

PROGRAM TASK:

1. To acquire fundamental knowledge regarding the histogenesis of oral structures.
2. To acquire fundamental knowledge concerning the morphology of oral structures.
3. To acquire fundamental knowledge about the physiology of oral structures.
4. To understand the dynamics involved in the development of both primary and permanent dentition.
5. To comprehend the anatomical and physiological characteristics of primary and permanent teeth.
6. To recognize deviations in tooth development.
7. To understand the composition of physiological content and its relevance to oral physiology.
8. To understand the origin of the oral ecosystem and its dynamics during childhood.
9. To identify the primary protective mechanisms within the oral cavity and the features of childhood immunity.

PREREQUISITES:

To commence the training in "Propaedeutics of Pediatric Dentistry," students are required to possess foundational knowledge in anatomy, histology, and human physiology.

EXPECTED OUTCOMES:

Upon completing the course, students should understand the primary processes that occur at each stage of the histogenesis of oral structures. This knowledge will serve as a foundation for implementing effective prevention and treatment strategies for oral diseases in childhood.

- **Knowledge** of the fundamental histological, morphological, and physiological processes affecting oral structures and the maxillofacial region; the stages in the dynamics of dental development; the causes, mechanisms of occurrence, and types of developmental deviations in both dentitions; understanding the composition and role of physiological contents under normal conditions and their specific features in childhood; the mechanisms and dynamics involved in the formation of the oral ecosystem; and knowledge of the protective mechanisms in the oral cavity and the characteristics of pediatric immunity.
- Develop skills to identify microscopic specimens and to provide detailed descriptions of the characteristics at each stage of histogenesis and morphology of oral structures. Additionally, to differentiate and recognize the features of teeth in both dentitions; to assess normal development as well as deviations in tooth formation, including the potential causes and the respective periods of their manifestation within primary and permanent dentitions.
- Acquire **competencies** to thoroughly understand the morphological characteristics of oral structures in childhood, thereby informing the selection of appropriate methods for prevention and treatment, as informed by the disciplines "Dental prophylaxis" and "Clinic of Pediatric Dentistry."

Forms of Training, Control, and Assessment

Forms and Methods of Training:

- Lectures, seminars, study of histological preparations and photographs, drawing microscopic preparations.

- Training utilizes aids such as multimedia presentations, diagrams, tests, and study of histological preparations and photographs.

Forms of Assessment:

- Comprehensive evaluation includes ongoing assessments, tests, colloquium, practical exam, and theoretical exam.
- The final grade is determined based on the average of the current grades, colloquium grade, practical exam grade, and theoretical exam grade at the conclusion of the fifth semester.
- Assessment criteria include student activity during the course and examination results throughout the session.

Components influencing the final grade:

- Participation in discussions
- Case study solutions
- Tests
- Practical and theoretical exam results.

Thematic Plan of Lectures and Exercises:

The course comprises 60 academic hours, allocated across various forms of workload:

- Lectures – 30 hours
- Practical classes – 30 hours.

LECTURE PROGRAM

IV Semester

1. Ontogenetic Development of the Maxillofacial Region – 2 academic hours
2. Tooth Germ – Elements of the Tooth Germ and Stages of Development – 2 academic hours

3. Histogenesis and Morphology of Tooth Enamel. Theories of Mineralization. Physiology of Enamel. Features of Primary and Permanent Children's Teeth – 2 academic hours
4. Histogenesis, Morphology, and Physiology of Dentin. Features of Primary and Permanent Children's Teeth – 2 academic hours
5. Histogenesis, Morphology, and Physiology of the Dental Pulp. Features of Primary and Permanent Children's Teeth – 2 academic hours
6. Histogenesis, Morphology, and Physiology of Dental Cementum. Features of Primary and Permanent Children's Teeth – 2 academic hours
7. Histogenesis, Morphology, and Physiology of the Periodontium and Alveolar Bone. Features of Primary and Permanent Children's Teeth – 3 academic hours

Semester V

1. Histogenesis, Morphology, and Physiology of the Oral Mucosa, Gingiva, and Periodontium. Features in Childhood – 2 academic hours
2. Dynamics in the Development of the Primary and Permanent Dentition – Stages and Terms – 2 academic hours
3. Anatomical and Physiological Features of Primary and Permanent Teeth – 2 academic hours
4. Anomalies in the Development of Teeth – Etiology, Pathogenesis, and Classification – 2 academic hours
5. Physiological Content of the Oral Cavity – Composition and Role in the Physiology of the Mouth – 2 academic hours
6. Oral Ecosystem – Origin and Dynamics in Childhood – 2 academic hours
7. Features in Childhood Immunity. Protective Mechanisms in the Mouth – 3 academic hours

EXERCISES PROGRAM

3rd Year, IV Semester

Type of exercises – Seminar

Duration – 2 academic hours biweekly

1. Introduction. History of Pediatric Dentistry in Bulgaria – 2 academic hours
2. Ontogenetic Development of the Maxillofacial Region – 2 academic hours
3. Tooth Germ – 2 academic hours
4. Histogenesis, Morphology, and Physiology of Enamel – 2 academic hours
5. Histogenesis, Morphology, and Physiology of Dentin – 2 academic hours
6. Histogenesis, Morphology, and Physiology of Dental Pulp – 2 academic hours
7. Histogenesis, Morphology, and Physiology of Cementum, Periodontium, and Alveolar Bone. **Colloquium.** – 3 academic hours

3rd Year, V Semester

Type of exercises – Seminar

Duration – 2 academic hours, biweekly

1. Histogenesis, Morphology, and Physiology of the Oral Mucosa, Gingiva, and Periodontium – 2 academic hours
2. Developmental Dynamics of Primary and Permanent Dentition and Surrounding Tissues – 2 academic hours
3. Anatomical and Physiological Characteristics of Primary and Permanent Children's teeth – 2 academic hours
4. Developmental Anomalies of Teeth: Etiology, Pathogenesis, and Classification; Variations in Number, Shape, Size, and Eruption. Anomalies in the teeth structures – dental dysplasias. – 2 academic hours
5. Contents of the Oral Cavity; Salivary Glands – 2 academic hours
6. Oral Cavity Ecology. – 2 academic hours

7. Oral Immunity. **Colloquium.** – 3 academic hours

RECOMMENDED LITERATURE:

Nanci. A. Ten Cate's Oral Histology. Development, structure, and function. 2013. 9th Edition. ELSEVIER

Bhaskar NS. Orban's oral histology and embryology. 2011. 13th edition. Elsevier.

Rajkumar K, Ramya R. Textbook of oral histology, physiology and tooth morphology. 2017. 2nd edition. Wolters Kluwer.

Berkovitz B.K.B, Holland. R.G, Moxaham J.B. Oral anatomy, histology and embryology. 2009. 4th edition. Mosby Elsevier.

Fehrenbech J.M, Popowics T. Illustrated dental embryology, histology, and anatomy. 2016. 4th edition. Elsevier.

Hollins C. Basics guide to anatomy and physiology for dental care professionals. 2012. WILEY-BACKWELL.

Ansari G, Golpayegani V.M, Welbury R. Atlas of pediatric oral and dental developmental anomalies. 2019. WILEY_BACKWELL.

Jose M. Manual of oral histology and oral pathology. 2018. 2nd edition. CBS Publishers & Distributors.

SYLLABUS OF PRE-CLINICS OF PEDIATRIC DENTISTRY

1. Ontogenetic development of the maxillofacial region, including the development of the lower and upper jaws, palate, and tongue; defects in the formation of the face.
2. Morphology and biological characteristics of the tooth germ.
3. Histogenesis of dental enamel.
4. Morphology and physiology of dental enamel, including characteristics during childhood.
5. Histogenesis of tooth dentin.

6. Morphology and physiology of tooth dentin, including characteristics during childhood.
7. Histogenesis, morphology, and physiology of the dental pulp, with characteristics in childhood.
8. Histogenesis of dental cementum.
9. Morphology and physiology of dental cementum, with characteristics in childhood.
10. Histogenesis, morphology, and physiology of the periodontium and alveolar bone, along with childhood characteristics.
11. Histogenesis, morphology, and physiology of the oral mucosa and gingiva, including childhood characteristics.
12. Physiology of the mouth—anatomy, histology, and physiology of the salivary glands.
13. Physiology of the mouth—salivation, saliva composition, saliva, and oral health.
14. Ecology of the oral cavity.
15. Developmental dynamics of primary teeth.
16. Developmental dynamics of permanent teeth.
17. Anatomical and physiological features of primary and permanent children's teeth.
18. Anomalies in the development of teeth - anomalies in number, shape, size, and eruption.
19. Anomalies in the development of teeth - anomalies in the structure - classification of dental dysplasias.
20. Dental developmental anomalies – etiological factors, pathogenesis.
21. Dental developmental anomalies – structural anomalies – inherited dysplasias.
22. Dental developmental anomalies – structural anomalies – congenital dysplasias.

23. Dental developmental anomalies – structural anomalies – acquired dysplasias.

24. Oral immunity – protective mechanisms in the oral cavity.

Protocol of:

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