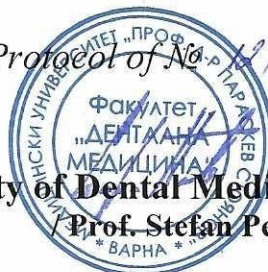




**MEDICAL UNIVERSITY**  
**“PROF. DR. PARASKEV STOYANOV” - VARNA**  
**FACULTY OF DENTAL MEDICINE**

*Approved with a Protocol of No. 12/27.12.2022.*

**Approved:**  
**DEAN of Faculty of Dental Medicine:**  
**Prof. Stefan Peev, MD, PhD,**  
**DSc/**



**EDUCATIONAL PROGRAMME**  
**OF “PROPEDEUTICS OF PEDIATRIC DENTAL MEDICINE”**

**Speciality: Dental Medicine**

**Discipline: obligatory**

**Educational-qualification degree “ MASTER”**

**Professional qualification “ PHYSICIAN IN DENTAL MEDICINE”**

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 <sup>th</sup> semester exams' session
credits (ECTS)	2+2 (4)		4
Extracurricular employment			60

**Lecturers: Prof. Dr. Radosveta Andreeva, DMD, PhD, DSc**

**Assoc. Prof. Dr. Milena Georgieva -Dimitrova, DMD, PhD**

**Assoc. Prof. Dr. Dobrinka Damyanova, DMD, PhD**

**Varna,2022**

## **ANNOTATION**

The course on **Pre-clinics of Pediatric Dentistry** provides basic knowledge about: the histogenesis, morphology and physiology of the structures in oral cavity; the dynamics of teeth development; abnormalities in dental morphology and structure; oral physiology; oral ecosystem and defense mechanisms in childhood.

This fundamental knowledge is of considerable importance for acquiring and developing skills for thorough organization and performance of prophylactic practices in the context of prevention of oral diseases, as well as for achieving competences for the adequate choice and proper application of treatment methods concerning oral-dental disorders in children.

The discipline is related to acquisition of detailed basic knowledge about the histogenesis, morphology and physiology of oral structures, as well as about the main physiological processes in the oral cavity.

## **TASKS regarding the application of the TUITION PROGRAM:**

1. Getting main knowledge of the histogenesis of oral structures.
2. Getting main knowledge of the morphology of oral structures.
3. Getting main knowledge of the physiology of oral structures.
4. Getting main knowledge, concerning the dynamics of development of primary and permanent dentition.
5. Getting main knowledge of anatomic and physiological characteristics of primary and permanent teeth.
6. Getting main knowledge of the deviations of teeth development.
7. Getting main knowledge of the compounds of the physiological fluid medium and its role for the normal processes in the oral cavity.
8. Getting main knowledge of the formation of the oral ecosystem and its dynamics at children's age
9. Getting main knowledge of the protective mechanisms in the oral cavity and specific features of the child's immune system

## **PRELIMINARY REQUIREMENTS:**

In order to start training in the Pre-Clinics of Pediatric Dentistry, it is necessary for students to have basic knowledge of the disciplines of: Anatomy, Histology and Physiology

### **EXPECTED RESULTS:**

1. After completion of the course of Pre-Clinics of Pediatric Dentistry, students have to be familiar with the performance of the main processes during the individual stages of the histogenesis of oral cavity structures. That theory-associated preparation will be the basis for conducting adequate prophylaxis of oral diseases in childhood.
2. To be capable to recognize a microscopic preparation and describe in detail the characteristics of each individual stage of the histogenesis of oral structures.
3. To know in detail the morphological characteristics of the oral structures in childhood, which is the basis for choosing appropriate methods of prevention and treatment - subject of the disciplines Dental Prophylaxis and Clinics of Pediatric Dentistry.
4. To get the capability to recognize the morphology and structure of teeth, periodontium and oral mucosa on microscopic samples and images.
5. To become acquainted with the physiology of the oral cavity structures and tissues.
6. To get knowledge about the terms of the dynamics of teeth development in order to be capable to determine the norm and the deviations from the norm in their development, indicating the possible causes and the time of their manifestation.
7. To get knowledge about the causes, mechanisms of occurrence and types of deviations in the development of teeth.
8. To become acquainted with the composition and role of the physiological fluid medium in norm and its characteristics in childhood.
9. To get knowledge about the mechanisms and dynamics in the formation of the oral ecosystem.
10. To get knowledge about the protective mechanisms in the mouth and the characteristics of children's immunity.

### **Tuition program:**

Name of the discipline: Pre-Clinics of Pediatric Dentistry

Education degree: Master

Duration of the course: two terms

Level of the course: Master Level M

Forms of evaluation: current control, examination in written form, tests, practical exam

Forms and methods of education: lectures, discussions, observation of histological images, drawing of microscope slides.

The course of education ends with an exam at the end of the 5th semester.

Aspects of formation of the mark:

- taking participation into seminars
- making solutions of different clinical cases
- solving tests
- result on the exam

## **DISCRIPTION OF THE COURSE**

The course contains 60 academic hours including 30 academic hours for lectures and 30 academic hours for practical classes.

The final mark of that discipline is formed on the base of current marks, marks of examination in written form, practical exam's mark and theory exam's mark.

- Estimation of student's awareness and efficiency of work during the course
- Exam's result during the session period

## **EDUCATIONAL MATERIALS:**

- Multimedia presentations, schemes, tests, observation of and comments on histological images.

## **AIM OF THE TUITION PROGRAM**

Getting detailed knowledge about the histogenesis, morphology and physiology of oral cavity structures, as well as about the basic physiological processes in the oral cavity.

## **LECTURE PROGRAM**

### **IV semester**

1. Ontogenetic development of the maxillofacial area – 2 academic hours.
2. Tooth germ - components of the tooth germ and stages of development – 2 academic hours.
3. Histogenesis and morphology of tooth enamel. Theories of mineralization. Physiology of enamel. Specifics of temporary and permanent children's teeth – 3 academic hours.
4. Histogenesis, morphology and physiology of dentin. Specifics of temporary and permanent children's teeth – 2 academic hours.
5. Histogenesis, morphology and physiology of dental pulp. Specifics of temporary and permanent children's teeth - 2 academic hours.
6. Histogenesis, morphology and physiology of dental cementum. Specifics of temporary and permanent children's teeth – 2 academic hours.
7. Histogenesis, morphology and physiology of periodontium and alveolar bone. Specifics of temporary and permanent children's teeth – 2 academic hours.

### **V semester**

1. Histogenesis, morphology and physiology of oral mucosa, gingiva and periodontium. Characteristics in childhood – 2 academic hours.
2. Dynamics of the development of temporary and permanent dentition - stages – 2 academic hours.
3. Anatomical and physiological characteristics of temporary and permanent teeth – 2 academic hours.
4. Dental dysplasia - etiology, pathogenesis and classification - 2 academic hours.
5. Physiological fluid content of the oral cavity - composition and role in the physiology of the mouth - 2 academic hours.
6. Oral ecosystem – formation, organization and dynamics in childhood - 2 academic hours.
7. Characteristics of children's immunity. Defense mechanisms in the mouth - 3 academic hours.

## **PRACTICAL CLASSES**

### **II course, IV semester**

**form of the classes – seminars**

**duration of the classes – 2 academic hours on each even/odd week**

1. Introduction. History of pediatric dentistry in Bulgaria – 2 academic hours.
2. Development of the maxillofacial area - 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 and periodontium - 2 academic hours.

### **III course, V semester**

**form of the classes– seminars**

**duration of the classes– 2 academic hours on each even/odd week**

1. Histogenesis, morphology and physiology of the oral mucosa, gingiva and periodontium - 2 academic hours.
2. Dynamics of development of the temporary and permanent dentition and surrounding dental tissues – 2 academic hours.
3. Anatomical and physiological characteristics of temporary and permanent children's teeth – 2 academic hours.
4. Dental dysplasia - etiology, pathogenesis and classification – 2 academic hours.
5. Physiology of the oral cavity. Salivary glands. - 2 academic hours.
6. Ecology of the oral cavity. – 2 academic hours.
7. Oral immune system – 2 academic hours.

## **RECOMMENDED LITERATURE:**

- Nanci. A. Ten Cate's Oral Histology. Development, structure, and function. 2013. 9<sup>th</sup> Edition. ELSEVIER
- Bhaskar NS. Orban's oral histology and embryology. 2011. 13<sup>th</sup> edition. Elsevier.
- Rajkumar K, Ramya R. Textbook of oral histology, physiology and tooth morphology. 2017. 2<sup>nd</sup> edition. Wolters Kluwer.
- Berkovitz B.K.B, Holland. R.G, Moxham J.B. Oral anatomy, histology and embryology. 2009. 4<sup>th</sup> edition. Mosby Elsevier.
- Fehrenbach J.M, Popowics T. Illustrated dental embryology, histology, and anatomy. 2016. 4<sup>th</sup> 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. 2<sup>nd</sup> edition. CBS Publishers & Distributors.

## **SYLLABUS OF PRE-CLINICS OF PEDIATRIC DENTISTRY**

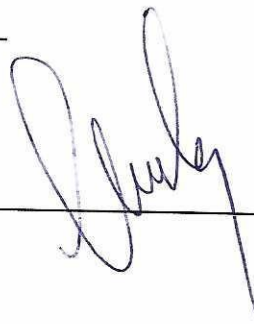
1. Ontogenetic development of the maxillofacial area. Development of mandible, maxilla and palate. Malformations of maxillofacial area.
2. Morphological and biological characteristics of the tooth germ.
3. Histology of the tooth enamel.
4. Morphology and physiology of the tooth enamel. Characteristics at children's age.
5. Histology of the tooth dentin.
6. Morphology and physiology of the tooth dentin. Characteristics at children's age.

7. Histology, morphology and physiology of the tooth pulp. Characteristics at children's age.
8. Histology of the tooth cement.
9. Morphology and physiology of the tooth cement. Characteristics at children's age
10. Histology, morphology and physiology of the periodontium and alveolar bone. Characteristics at children's age. Characteristics of the periodontal apparatus at children's age.
11. Histology and morphology of the oral mucosa.
12. Physiology of the oral mucosa. Characteristics at children's age.
13. Physiology of the oral cavity- anatomy, histology and physiology of the salivary glands.
14. Physiology of the oral cavity- saliva secretion, constituents of saliva, saliva and oral health.
15. Ecology of the oral cavity.
16. Dynamics of development of primary teeth.
17. Dynamics of development of permanent teeth.
18. Anatomic and physiological characteristics of primary and permanent children's teeth.
19. Anomalies of tooth development- anomalies of structure- teeth structural disturbances'. Classification.
20. Anomalies of tooth development- etiological factors, pathological mechanisms.
21. Anomalies of tooth development- anomalies of structure- inherited teeth structural disturbances.
22. Anomalies of teeth development- anomalies of structure- congenital teeth structural disturbances.
23. Anomalies of teeth development- anomalies of structure- acquired teeth structural disturbances.
24. Oral immune system in childhood age.

Department Council of ..... 104/02.12.2022c.

Developer of the Syllabus: \_\_\_\_\_

Approved by Chair of the Department: \_\_\_\_\_

A handwritten signature in blue ink, written over a horizontal line. The signature is stylized and appears to be a first name followed by a last name.