

**ACADEMIC STANDARD**  
**FOR THE “PEDIATRIC DENTISTRY” TRAINING COURSE**

The Department of Pediatric dentistry conducts the training in the following disciplines:

- Pediatric dentistry – Part I
- Dental prevention
- Pediatric dentistry – Part II

The training ends with Pregraduate Clinical Clerkship in Pediatric dentistry.

**1. Goals of the “Pediatric dentistry” training course**

**The discipline “Pediatric dentistry - Part I”** (taught in 2 semesters) presents the basic concepts concerning histogenesis, morphology and physiology of the dental structures, dynamics in the development of primary and permanent dentitions, abnormalities in the dental morphology and structure, oral physiology, oral ecosystem and defense mechanisms in children, factors influencing the normal development of hard dental tissues, gingiva and oral mucosa.

The discipline-related knowledge and skills improve the ability for planning and accomplishing prevention and treatment of oral diseases in children.

**The discipline "Dental prevention"** (taught in 2 semesters) emphasizes the acquisition of knowledge and skills for primary prevention of dental caries and periodontal diseases, which are the most common oral diseases. "Dental prevention" training covers the two main types of methods for prevention of oral diseases:

- prophylactic methods for increasing the resistance of hard dental tissues, periodontium and oral mucosa
- evaluation and control of the pathological factors in the oral cavity to prevent the development of oral diseases.

**The discipline “Pediatric dentistry – Part II”** (taught in 4 semesters) gives the opportunity for acquiring knowledge and skills in clinical work with children in the following main directions:

- Examination of a child’s oral status, oral diseases risk assessment, elaboration of individual preventive programmes
- Clinical characteristics, diagnostics and treatment of dental caries in primary and permanent teeth in children
- Clinical characteristics, diagnostics and treatment of diseases of the dental pulp and periodontal ligament in primary and permanent teeth in children
- Clinical characteristics, diagnostics and treatment of dental dysplasia in children
- Clinical characteristics, diagnostics and treatment of trauma of the primary and permanent teeth in children
- Psychological problems and methods of pharmacological and non-pharmacological management of behavior during dental treatment of children

- Clinical characteristics, diagnostics and treatment of diseases of the periodontium and oral mucosa in children

The goals of the Pediatric dentistry training are consistent with:

- the mission and concept of the University
- the volume and credit rating of the discipline (the ECTS system),
- the qualification specification
- the educational degree (Master)

The goals are in accordance with the location and sequence of the disciplines in the specialty training process and the curriculum.

## **2. Contents of the disciplines**

The topics and hours of lectures and exercises for each of the three disciplines are set out in the curriculum and on the site of the University: *mu-plovdiv.bg*

The content is arranged chronologically, so that each subsequent lecture and the related exercises use material and concepts already taught.

## **3. Academic resources**

The academic staff of the Department of Pediatric dentistry includes: 4 habilitated tutors, 9 non-habilitated assistant professors holding PhD degree and 7 non-habilitated assistant professors. 18 members of the staff have acquired specialty in Pediatric dentistry, 4 have acquired specialty in General dentistry, and 2 conduct specialization training in Pediatric dentistry.

Lectures are given by the habilitated staff members (Associate Professor or Professor) holding an academic and scientific degree (PhD or Doctor of Medical sciences) acquired in a doctoral program.

The exercises are conducted by the habilitated and non-habilitated staff (Assistant Professor, Chief Assistant Professor, Associate Professor). All of the non-habilitated staff members hold an academic and qualification degree (AQD) “Master of Dental Medicine” and are employed in the Department after a contest.

## **4. Material resources**

The Department of Pediatric dentistry offers:

- 5 clinical training rooms, each equipped with 6 dental units, including a unit for left-handed dental practitioners, 6 working chairs, a monitor, a nurse cabin and a room for evaluation, education and motivation for oral hygiene of the patients;

- 2 seminar rooms provided with multimedia system, demonstration models and materials;
- 1 pre-clinical training room provided with 12 working sites with head simulators, plastic teeth sets, all necessary hand-pieces, tools and supplies for the purposes of the pre-clinical training as a prerequisite for the future clinical practice.

One of the clinical rooms is used for the training during the Pregraduate clerkship in Pediatric dentistry. The Department provides a high-technology dental office, with a Er-YAG laser, a dental operative microscope and full range of modern dental equipment for early detection and treatment of oral diseases, which creates excellent conditions for students, PhD students and post-graduate students training and research activities. The Department also provides an office for postgraduate students as well as a specially created playing area for the small patients.

## 5. Lectures

Lectures are prepared and delivered as multimedia presentations and are available to students on-line, so that they can prepare for each exercise. Volume and format of the lecture presentations are choices of the lecturer.

**Microsoft Teams, Office 365** is the training platform used for conducting the Distance Learning at the Medical University - Plovdiv.

## 6. Practical exercises

Exercises are carried out in the student groups. The practical exercises in each of the three disciplines taught in the Department of Pediatric dentistry have specific characteristics.

The exercises in **Pediatric dentistry - Part I** are seminar. Methodical instructions, tests, and multimedia presentations on the topics in the curriculum are provided for the exercises. Individual and team tasks are assigned to the students, discussions are made. The teaching assistant checks:

- preparation of the student
- results (acquired knowledge and skills) of the current exercise

Special workbooks in which students mark the main points of each topic and draw schemes and figures are provided.

The exercises in **Dental prevention** are seminar. Methodical instructions and tests on the topics in the curriculum are provided for the exercises. Individual and team tasks are assigned to the students, discussions are made. The teaching assistant checks:

- preparation of the student
- results (acquired knowledge and skills) of the current exercise

The exercises in **Pediatric dentistry - Part II** are clinical.

During the first and second semester of training in this discipline the exercises are held in the pre-clinical training room and include:

- seminar part, during which topics previously presented at the lectures, as well as various clinical cases, are discussed, and
- practical part, during which the teaching assistant demonstrates the practical work on plastic teeth fitted in a head simulator, followed by students practice.

Special workbooks, in which the practical work is described, are provided to the students.

After accomplishing the pre-clinical training course, in V year, students attend the clinical exercises in clinical training rooms, which include:

- seminar part, during which topics previously presented at the lectures, as well as various clinical cases are discussed, and
- practical part, during which the teaching assistant demonstrates various clinical cases and students work with patients up to 18 years of age. Clinical practice, overseen by the assistant, includes: patient`s examination, assessment of the risk for development of oral diseases, prevention of oral diseases by application of different materials and methods, instructions and motivation for personal oral hygiene, professional oral hygiene, treatment of the diseases of hard dental tissues, dental pulp and periodontal ligament of deciduous and permanent teeth, treatment of diseases of the periodontium and oral mucosa, and treatment of the traumatic injuries of deciduous and permanent teeth in children.

Special workbooks, in which all the seminars, colloquia and clinical cases the students work on and on the basis of which cover the required norms for the semester are recorded, as well as special tools for risk assessment, elaboration of a preventive program and treatment planning are provided to the students.

## **7. Information resources. Basic literature. On-line resources.**

The lecturer is required to have the lectures and exercises on the subject in electronic form and to submit lectures, training tests and other educational materials on the internet site. In accordance with the requirements for providing access to the training materials to students, SharePoint, as a part of the Microsoft Office 365 - the official training platform for the distance learning at the Medical University-Plovdiv, is used.

List of the basic recommended literature on the subject, with priority to available sources, is present. Recommended Internet resources that can be used in finding of appropriate materials for the self-preparation of the student are given.

### **Recommended sources for self-preparation in Pediatric dentistry–Part I**

1. Lecture course in Pediatric dentistry-Part I, Department of Pediatric Dentistry – Plovdiv
2. Tests in Pediatric dentistry – Part I, Medical University - Plovdiv, 2020
3. *Garant P.R.* Oral Cells and Tissues,. Quintessence Publishing Co, Inc, 2003
4. *Nanci A.* Ten Cate`s Oral Histology, Development, structure, and Function. Sixth Edition, Mosby, 2013.
5. *Chiego D.* Essential of Oral Histology and Embryology: A clinical Approach, Mosby, 3 Edition, 2014.
6. *Koch G, Poulsen S.* Pediatric dentistry. John Willey and Sons, 2009.
7. *Wellbury, R., Duggal.* Pediatric Dentistry. 5-edition. Oxford University Press, 2005.

### **Recommended sources for self-preparation in Dental prevention**

1. Lecture course in Dental prevention, Department of Pediatric Dentistry – Plovdiv
2. Preventive dentistry – manual for dental students, Plovdiv, 2021.
3. *Axelsson P.* Preventive materials, methods and programs, Quintessence 2004.
4. *Axelsson P.* Risk prediction and preventive dentistry, Quintessence 2004.
5. *American Academy of Pediatric dentistry.* Guideline on fluoride therapy.  
[www.aapd.org/media/Policies\\_Guidelines/G\\_Fluoride\\_Therapy.pdf](http://www.aapd.org/media/Policies_Guidelines/G_Fluoride_Therapy.pdf)
6. *American Dental Association.* ADA statement on enamel (dental) fluorosis.  
[www.ada.org/prof/resources/positions/statements/fluoride\\_community\\_enamel.asp](http://www.ada.org/prof/resources/positions/statements/fluoride_community_enamel.asp)
7. *FDI/WHO/ADR.* Global consultation on oral health through Fluoride.  
<http://www.fdiworldental.org>.
8. *World Health Organization.* The world health reports 2003. Geneva: WHO; 2003  
[http://www.who.int/oral\\_health](http://www.who.int/oral_health)

### **Recommended sources for self-preparation in Pediatric dentistry–Part II**

1. Lecture course in Pediatric dentistry-Part II, Department of Pediatric Dentistry - Plovdiv
2. *American Academy of Pediatric dentistry.* Fluoride therapy.  
[https://www.aapd.org/media/Policies\\_Guidelines/BP\\_FluorideTherapy.pdf](https://www.aapd.org/media/Policies_Guidelines/BP_FluorideTherapy.pdf)
3. *American Dental Association.* ADA statement on enamel (dental) fluorosis.  
[www.ada.org/prof/resources/positions/statements/fluoride\\_community\\_enamel.asp](http://www.ada.org/prof/resources/positions/statements/fluoride_community_enamel.asp)
4. *FDI/WHO/ADR.* Global consultation on oral health through Fluoride, 2016.  
[https://www.who.int/oral\\_health/events/Global\\_consultation/en/](https://www.who.int/oral_health/events/Global_consultation/en/).
5. *Heasman P.* Restorative Dentistry, Paediatric Dentistry and Orthodontics (Master Dentistry), 2008.

6. *Koch G, Poulsen S, Espelid I, Haubek D.* Pediatric Dentistry: A Clinical Approach, 3rd Edition, 2017.
7. *Koch G, Poulsen S.* Pediatric Dentistry: A Clinical Approach, 2nd Edition, 2013.
8. *McDonald RE, Avery DR, Dean JA.* Dentistry for the child and adolescent, St. Louis, Mo.: Mosby, ©2004
9. *Pinkham J, Casamassimo P, Fields HW, McTigue DJ, Nowak A.* Pediatric Dentistry: Infancy Through Adolescence (Pediatric Denistry), St Louise, Elsevier Saunders, 2005
10. *Shindova M.* Behaviour Management Problems and Emotional Reactions of Children to Dental Treatment, Plovdiv, 2021.
11. *Srivastava VK.* Modern Pediatric Dentistry, 2011.
12. *Welbury R, Duggal M, Hosey M.* Paediatric Dentistry, 2012.
13. *Welbury R, Duggal MS, Hosey MT.* Paediatric Dentistry, Oxford University Press, 2005
14. *Welbury R.* Paediatric Dentistry, 1999
15. *World Health Organization.* World health report 2010. WHR 2010. <https://www.who.int/whr/2010/en/>

## **8.Ongoing monitoring and evaluation**

Students need to be loaded dynamically and intensely over the semester. The presumption is that the way for the acquisition of knowledge and skills is an important factor for their depth, durability and applicability. Monitoring of the knowledge of students is carried out through seminars, colloquia and tests during the semester. Evaluation of the clinical skills of students is carried out through a practical supervision that takes place at the end of the last semester of clinical training. Information and explanation of the results of the controls are given to the students (on the next exercise) to facilitate their further preparation.

The results of the monitoring come as a component in the average assessment grade for each semester, reflected in the personal record of the student.

## **9. Self-preparation and non-auditorium individual training of students**

The self-preparation is helped by the teaching assistant, who guides the student, in both literary sources and methods of their utilization. Training tests, including on-line tests, for self-preparation and training are given to the students.

## **10. Cooperation between teachers and students**

This cooperation is expressed in:

- Commitment of the teacher to the student and his self-preparation, his current training problems and finding opportunities to achieve more with an individual learning program
- Councelling hours for individual consultations with students are scheduled by the teacher
- Participation of students in teams for scientific assignments, research, projects, etc.
- Organizing and conducting workshops on various topics

## 11. Exams

In the Department the assessment of acquired knowledge and skills of students includes:

1. Current assessment grades are given for:

- The results of the student in the seminar and clinical exercises, course assignments and individual tasks, participation in teams for scientific projects, research, etc.
- The results from seminars, colloquia, tests and practical supervision, according to the curriculum

2. Semester exam on the disciplines

3. State graduation exam following a successful completion of the Pregraduate Clinical Clerkship in Pediatric Dentistry

## 12. Standards for evaluation

The successful learning of the disciplines of Pediatric dentistry training course is evaluated as the value of grades consisting of two main elements:

**The first** includes the evaluation of the academic activity of the student throughout the semester (not more than 30%), as well as the individual evaluation of the ongoing monitoring of knowledge (seminars, colloquia, and tests) and practical skills of students (applies to the Pediatric dentistry-part II and the undergraduate clinical clerkship in Pediatric Dentistry).

**The second** includes the evaluation from the discipline exam (no more than 70%). Regulations for the conduct of the exam are of importance in order to minimize the possibilities of manipulating the results.

Clear standards for evaluation are developed for the discipline.

Levels of reproduction and use of the acquired knowledge by the students are defined as: informative-reproductive, technological-productive, problem-productive, innovative -creative. On the basis of the mentioned above, a certain characteristic for each assessment grade for the theoretical component of the exam is determined:

- **Poor (2)** receives a student with scarce knowledge that cannot serve as a basis for the next levels of training
- **Average (3)** receives a student who reproduces the knowledge in "ready scheme", key points of the topic being developed are missing; lack of readiness for self-use of the acquired knowledge and professional competencies, the terminology is not learned, the exposition is characterized by use of poor language;
- **Good (4)** receives a student who develops the subject descriptively, reproductively, using typical situations; limited autonomy in using the knowledge and the professional competences acquired; In the exposition, although there is a good language culture, inaccuracies are allowed in the used terms

- **Very good (5)** receives a student who develops the subject individually, productively, non-standardly, looking for a new algorithm and analysis of the used literary data; attempts to draw and substantiate his thesis; adequately uses the concepts of the scientific field of the discipline studied, has a good language culture;
- **Excellent (6)** receives a student who draws the subject independently, logically, with the presence of a creative element; reasonably and originally uses and interprets the literature related to the issue; readiness to use the acquired knowledge and professional competences are observed; accuracy and rich language culture of the exposition, clinical thinking.

At the start of the education students should be acquainted with the evaluation standards, the monitoring procedures and the opportunities for obtaining feedback on their progress throughout the semester.

### **13. Formation of the final assessment grade**

The final assessment grade determines the extent to which the student has achieved the training goals, placed at the beginning. It is multi-component and includes the assessment of the ongoing control, the assessment of the written final exam and/or the assessment of the oral final exam.

The final assessment grade is obtained as a sum of the grades of the different components - ongoing control, test, clinical task/preventive programme, written exam, oral exam, recorded using a six-point evaluation system.

**If one of the components of the final exam is poor (2), the final assessment grade is obligatory poor (2).**

The components involved in the formation of the final assessment grade for each discipline are determined by the Department Board with the approval of the present academic standard of the discipline each year.

### **14. Documenting, storing of the results and controlling of the evaluation process**

- Assessed students have the right and the obligation to be informed about the regulation, the procedures and the results of the evaluation, to overcome claims and complaints in case of non-observance of the current rules.
- The right of a student within the meaning of the preceding paragraph is valid in the case of established technical omissions or errors (e.g. in the calculation or writing the marks) and on the grounds of a serious discrepancy in the knowledge, skills and competences actually demonstrated, and their final assessment.
- Corrections to grades in the cases under the preceding paragraph are allowed in the Student Book, the examination report or the account in the General Ledger only by the main tutor of the discipline
- Any controversies and claims by students are made in writing to the examiners board, which should provide a reasoned response by the end of the next working day



- Established and proven cases of serious violation of the rights of the student in the assessment of his knowledge, skills and competences are addressed through a written complaint to the Vice Rector of QM.

Exam materials and documents are stored and students are given the opportunity to get acquainted with them and the grounds for the assessment following a procedure announced in advance. The period in which access to the materials and results is provided to the students is no longer than 3 (three) working days after the exam date.

Characteristic of the discipline is provided to the student at the beginning of the training course. This is in accordance with the HEA Art. 56, par.1. " the tutors are required to develop and announce in an appropriate manner and description their lecture course, including the titles and sequence of topics in the curriculum, recommended literature, way of forming of the assessment grade and way of evaluating of knowledge and skills".

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Approved by the Department Board with Protocol №153/15.02.2023