

## **ACADEMIC STANDARD**

### **FOR THE COURSES IN THE DEPARTMENT OF PROSTHETIC DENTISTRY**

**The Department of Prosthetic dentistry provides training in the following disciplines:**

- Dental Materials**
- Prosthetic dental medicine – part I**
- Prosthetic dental medicine – part II**
- Pre-graduation training in Prosthetic dental medicine**

#### **1. Aim of the disciplines provided in the Prosthetic Dentistry Department**

**Discipline „Dental Materials”/duration 2 semesters/:**

Acquirement of knowledge in the composition, the chemical structure, the physical, chemical, mechanical, technological properties and biocompatibility of the materials applied in prosthetic manufacturing and restoration of lost or damaged tissues, as those used in the intermediate stages of the prosthesis fabrication.

Practical training is aimed at creating habits for utilizing of these materials.

**Discipline„Prosthetic Dental Medicine”– – part I / duration 3 semesters /:**

To create basic theoretical knowledge and practical skills in General and Prosthetic Dentistry by studying:

- the normal morphology and functions of the masticatory apparatus and their age-related physiological changes during human life,
- the basic theoretical formulations and norms in Prosthetic Dentistry,
- the basic principles of planning and construction and the technology of fabrication of the most commonly used prosthetic dental appliances,
- the basic constructional principles and technology for fabrication of the most widely used dentures.

**Discipline “Prosthetic Dental Medicine – Part II” / it is studied for 6 semesters/:**

Acquiring of own principles and methods for prophylaxis, diagnosis and treatment of prosthodontic related problems, developed from the Prosthetic Dental Medicine. This is achieved by studying of the etiology, the pathogenesis, and the pathological symptoms of the Prosthodontics related problems. This method enables the achievement of correct clinical approach when making a treatment plan for the prosthetic treatment.

The aims of the education in the subjects of Dental Materials and Prosthetic Dental Medicine are coordinated with:

- The mission and the concept of the university,
- The size and the credit rating of the subject /according to the ECTS system, as shown in the curriculum/,
- Qualification characteristics of the specialty,
- Degree of education /Master/.

The aims are coordinated with the place of the discipline in the specialty and the chronology of the curriculum.

## **2. Educational content of the disciplines**

The topics, the duration of the lectures, the lessons and the course assignments for each subject are shown in the student timetables in the web site of Medical University - Plovdiv: [www.mu-plovdiv.bg](http://www.mu-plovdiv.bg)

The content is arranged in a chronological order so that every following lecture and related practical classes use previously studied material and terms.

## **3. Academical resources**

The academic staff of the department includes 4 habilitated Professors, 28 Assistant Professors. 8 of the Assistant Professors have a PhD degree. From all the teachers, 24 have acquired a speciality in Prosthetic Dentistry. There are 6 Chief Assistant Professors in the Department.

The lectures are presented by habilitated teachers / Professor and Associate Professor / with PhD degree. Single lectures can be present of Assistant Professors with a PhD degree in the relevant doctor's program after decision of the Faculty Council.

Practical lessons are covered by non-habilitated teachers / Assistant professor, Chief assistant professor /. Non-habilitated teachers hold a Master's degree in dental medicine and are appointed after a competition.

## **4. Material resources**

The Department of Prosthetic Dental Medicine has:

- Dental laboratory with 11 dental technicians

- A technical hall in which the students make the prosthetic restorations in the discipline "Prosthetic dental medicine - 2nd part" under the supervision of a dental technician or an Assistant Professor.
- 1 hall for the discipline "Dental materials" / 12 working places /
- 3 halls for the discipline "Prosthetic dentistry – part I" / 30 working places /
- 2 phantom halls for the discipline "Prosthetic dentistry – part II" / 20 working places /
- 5 clinical halls for the discipline "Prosthetic dentistry – part II" / 40 working places /
- 1 hall for pre-graduate practice in "Prosthetic dentistry" / 12 working places /
- 2 seminar halls (total 49 places)
  - 1 clinical dental office for patients with disabilities – 1 working place
- Specialized office for Implantology – it is situated on the territory of the Department, but it is a part of the Center of Dental Implantology (CDI)
- Specialized CAD / CAM Center / Dental office with Laboratory section, CAD/CAM Computer hall and 3D printing hall/ - it is situated on the territory of the Department.

The rooms where the students are trained are equipped with dental technicians, phantom installations, dental units. For Dental Materials course are provided an apparatus for investigation of micro-tensile strength and a thermocycler.

## **5. Lectures**

Lectures are prepared and exported in multimedia presentations, which are provided to the students electronically (in Share Point) in order to be able to prepare for each occupation. The volume and format of the lectures are chosen by the lead lecturer.

## **6. Practical lessons**

They are held in groups. In each of the disciplines taught at the department, the lessons are characterized by specific features.

Lessons in Dental materials are practical and theoretical.

Instructions, guides, tests, samples of various dental materials and tools are provided for the lessons. There are placed individual and team tasks. Components that must be checked:

- the student's preparation,
- the results (obtained knowledge and skills) of the specific lesson.

The Assistant Professors demonstrate in front of the students what they must do and then they practice:

- the main methods of research the composition and properties of dental materials
- the technology of processing dental materials
- Clinical manipulations associated with the use of dental materials

The practical lessons in **Prosthetic dentistry – part I** are practical and seminar.

Methodological guides, manuals, tests, models, samples of various prosthetic restorations, dental materials and instruments are provided for the practical lessons. Individual tasks are assigned. The followed criteria are verified:

- The student's preparation,
- The results (obtained knowledge and skills) of the specific practical lesson.

The following demonstrations are made to the students and after that they are supposed to reproduce:

- Drawing, sculpting and wax modeling of teeth
- Manufacturing of artificial dental crowns, bridges, removable partial dentures, complete dentures.

Students are provided with notebooks that reflect the seminars and colloquiums and all the cases on which they work and based on that they make the required norm for the semester.

The practical lessons in **Prosthetic dentistry - Part II** are clinical. During the first semester of the education in this discipline the practical lessons take place in a phantom hall and include:

- A theoretical part, where topics from the theoretical material presented during lectures are discussed.
- A practical part where the assistant professor demonstrates the work on a phantom head / artificial teeth, partially edentulous jaws, fully edentulous jaws / and after that the students repeat the demonstration on their own .

After successfully passing the Phantom Course, the students begin attending clinical lessons in clinical halls that include:

- A seminar part in which topics from the theoretical material, previously given in lectures, are discussed as well as different cases concerning a given patient.

- A practical part during which the educator demonstrates different clinical cases and under his guidance students work with patients. The clinical work includes examination and filling patient's History of disease, treatment of defects of dental hard tissues with crowns, treatment of defects of the dental arches with fixed or removable prosthetic constructions, treatment of edentulous patients with full dentures. Based on the knowledge and skills acquired in the discipline **Prosthetic Dental Medicine- Part I**, students have the opportunity to perform the laboratory stages by themselves.

Students are given notebooks for the practical lessons in which the conducted seminars and colloquiums are registered as well as all clinical cases they work on and on base of which they cover the required norm for the semester.

#### **7. Sources of information. Main literature. Sites.**

The educator must have developed lectures and practical lessons about the discipline and must provide lectures, tests and other educational materials by electronic means.

A list of the main recommended literature concerning the discipline is given with priority on the available resources. On-line sources for finding suitable information for students' preparation are also recommended.

#### **Sources for personal informal learning for the discipline Dental Materials.**

1. Лекционен курс по Материалознание

2. Иванов, Ст. Учебник по материалознание за зъботехници. С., Мед. и физкултура, 1991

3. Иванов, Ст. Ръководство за упражнения по материалознание. С., Мед. и

физкултура, 1992 4. Кисов, Хр., Ив. Анастасов. Ръководство за практически упражнения по материалознание. Мед. И Физк., София, 1995.

5. Кисов, Хр. Стоматологична керамика Част I: Основни принципи, материали и инструментариум. С, Индекс, 1997
6. Кисов, Хр. Отпечатъчни материали и отпечатъчни методи в неподвижното зъбопротезиране. Индекс, 1998
7. Кисов, Хр. Ормосери Дефинит ОМС. С., Индекс, 1990
8. Кисов, Хр. Стоматологични цименти и техники на циментиране на протезните конструкции. - С., Непрекъснато усъвършенстване, 2008
9. Кисов, Хр. Материалознание за стоматолози. Университетско издателство "Св. Климент Охридски", София 2019
10. O'Brien. Dental Materials and Their Selection' (Fourth Edition). Quintessence Publishing
11. Phillips' Science of Dental Materials, Saunders, Elsevier, 2013, 12 Edition.

**Източници за самостоятелна подготовка по дисциплината Протетична дентална медицина – I ва част**

1. Лекционен курс по Протетична дентална медицина – I ва част
2. Ралев, Р., Т. Пеев, А. Филчев. Пропедевтика на протетичната стоматология, МФ, София, 1995
3. Ралев, Р., А. Филчев. Пропедевтика на протетичната стоматология, МФ, София, 2008
4. Тодоров, Г.: Ръководство за практически упражнения по пропедевтика на протетичната дентална медицина. I част – Конструкции за неподвижно протезиране. II част – Скелетирана моделно лята протеза. МУ-Пловдив, 2013
5. Rickne C. Scheid. Woelfel's Dental Anatomy: Its Relevance to Dentistry (Eighth Edition). Wolters Kluwer
6. Herbert T. Schillingburg et al. Fundamentals of Fixed Prosthodontics (Fourth Edition). Quintessence Publishing
7. McCracken. Removable Partial Prosthodontics (Eleventh Edition). Elsevier, MOSBY.

8. Zarb, Hobkirk, Eckert, Jakob. Treatment of Edentulous Patients. Complete Dentures and Implant-Supported Prosthesis, Elsevier, 13 Edition.

**Източници за самостоятелна подготовка по дисциплината Протетична дентална медицина – I I ра част**

1. Лекционен курс по Протетична дентална медицина – I I ра част
2. Георгиев, Г., Н. Попов, Б. Николов. Клиника на ортопедичната стоматология. С, Мед. и физкултура, 1988
3. Попов, Н. Клиника на протетичната стоматология. МФ, София, 1992
4. Пеев, Т. А. Филчев. Клиника на протетичната дентална медицина. Жиемкей, С, 2008
5. Herbert T. Schillingburg et al. Fundamentals of Fixed Prosthodontics (Fourth Edition). Quintessence Publishing
6. McCracken. Removable Partial Prosthodontics (Eleventh Edition). Elsevier, MOSBY.
7. Zarb, Hobkirk, Eckert, Jakob. Treatment of Edentulous Patients. Complete Dentures and Implant-Supported Prosthesis, Elsevier, 13 Edition.

**Имплантология (Implantology):**

1. Hughes F., Seymour K., Turner W., Shahdad S., Nohl F. Clinical Problem Solving in Periodontology & Implantology. Elsevier, 2013.
2. Misch C. Contemporary implant dentistry. Mosby Elsevier, 2008.
3. Watzek G. Implants in Qualitatively Compromised Bone. Quintessence Publishing, 2004.
4. Misch C. Dental Implant Prosthetics. Second Edition. Elsevier, 2015.

**Държавен изпит (Final Exam of Prosthetic Dentistry):**

1. Основен лекционен курс / Main lecture course
2. Литературата по отделните дисциплини / The literature for the main Disciplines

**ДОПЪЛНИТЕЛНА ЛИТЕРАТУРА (ADDITIONAL LITERATURE):**

1. Michael E. MacEntee. The Complete Denture - A clinical Pathway. Quintessence Publishing.

2. P. Finbarr Allen and Sean McCarthy. Complete Dentures From Planning to Problem Solving (Second Edition). Quintessence Publishing.
3. George Freedman. Contemporary Esthetic Dentistry, Elsevier, MOSBY, 2012.

## 8. Control of the student work

Students should load dynamically and intensively during the semester. It is assumed that the way in which knowledge and skills are acquired is an important factor in their depth, durability and applicability. Current control of students' knowledge is carried out through seminars, colloquiums and tests during the semester. Assessment of practical skills in the discipline Prosthetic dentistry – I Part is a practical examination at the end of the fourth semester. Assessment of Clinical Skills in the Course of Prosthetic Dental Medicine - Part I I is done by a practical, clinical examination at the end of X semester. Students are provided with timely information and explanations of the results of the test (the next exercise) to assist in their further preparation. The results of these checks are included as a component in the final grade for each semester, reflected in the student's personal card.

## 9. Individual preparation and out-of-work work of the student

The self-directed work is guided by the lecturer (assistant) who guides the student both in literary sources and in the methods of their absorption. They also provide training tests, incl. on-line, for independent work and student exercises.

## 10. Cooperation between lecturers and students

This cooperation is expressed in:

- The teacher's commitment to the student and his / her pre-training, current difficulties in learning the material and opportunities with an individual learning program to achieve more.

Use of consultation hours.

- Involving students in teams for scientific tasks, research, projects, etc.
- Organizing and conducting workshops with different themes

## 11. Exams

Current assessments provided in the curriculum of the discipline are given for:

1. Student's results on seminar or clinical classes, course assignments and individual tasks, work of the student with the assistants on scientific studies and projects, etc .;
2. Conducting seminars, colloquiums, tests and practical exams according to the timetable.

Exam in the subject

Final Examination in Prosthetic Dentistry after successful pre-graduate practice

## 12. Evaluation standards

The successful study of the subjects of Dental Materials and Prosthetic Dentistry from the curriculum is measured as an evaluation value divided into two main elements:

- The first includes the assessment of the student's activity throughout the semester (not more than 30%). Includes separate marks of ongoing control (tests), complete and qualitative implementation of the forms for self-study provided in the curriculum of the subject.
- The second includes the exam on the subject (not more than 70%). It is also important to have the test regulation so as to minimize the possibility of manipulating the results.

The subject develops clear assessment standards.

The levels of reproduction and use of knowledge by students are defined as information-reproductive, technologically productive, problematic-productive, innovative-creative. On the basis of the above, any evaluation of the theoretical component of the exam is defined as a characteristic:

- Poor (2) gets a low-knowledge student who can not serve as the basis for the next levels of pre-clinical and clinical training.
- Average (3) receives a student who reproduces knowledge in a "ready scheme", missing basic points of the topic being developed; lack of readiness for self-use of the acquired knowledge and professional competencies; terminology is not learned, the speech is characterized by poor language;
- Good (4) receives a student who presents the topic descriptively, reproductively, using typical situations; limited autonomy by using the gained knowledge and the acquired professional competences; in the exposition, although there is a good language culture, there are inaccuracies in the used concepts;
- Very good (5) receives a student who presents the topic independently self-productive, non-standard, looking for a new algorithm and analysis of the used literary data; tries to explain and defend his thesis; adequately uses the concepts of the scientific field of the studied discipline, has a good language culture;

- Excellent (6) gets a student who independently, logically, with the presence of a creative element draws the topic; reasonably and originally use and interpret the literature relating to the topic; awareness and willingness to use the acquired knowledge and professional competence are observed; accuracy and rich language culture of the exposition.

At the beginning of the classes the students should be familiar with the evaluation standards, the procedures of conducting current control and the opportunities for getting feedback on their progress during the semester.

### **13. Calculating the final grade**

The final grade determines in what degree the student has achieved the aim of the education, set at the beginning. The grade is multi-component and includes a mark from a essay final exam, from an oral final exam, and from a current control.

For each component involved in the final grade, a coefficient of significance (0 to 1) is determined, where the amount of the coefficients should always be equal to 1. The final score is obtained as a sum of the grades of the 6-degrees's evaluation system from the different components multiplied by the respective coefficients of significance.

$Q_{\text{final grade}} = K_1 Q_{\text{grade from current control}} + K_2 Q_{\text{grade from essay exam}} + K_3 Q_{\text{grade from oral exam}}$

If one of the final exam components is Poor 2, the final mark is necessarily Poor 2.

The compents involved in the formation of the assessment and the coefficients of significance for each discipline are determined by the Academic Council with the adoption of the current academic standard of the discipline.

### **14. Documentation, storing results and control of the assessment activity**

- Assessed students have the right and the obligation to inform about the regulation, the procedures and the results of the evaluation, to make claims and complaints in case of non-observance of the current rules.
- The student's right within the meaning of the preceding paragraph is valid in the case of identified technical deficiencies or errors (eg when calculating or assessing) and on the grounds of a discrepancy in the knowledge, skills and competencies actually shown, and the final assessment them.
- Estimates of the assessments 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 titular of the discipline.
- Any controversies and claims by students are made in writing to the assessment team, which should provide a reasoned response by the end of the next business day.

- Established and proven cases of serious violation of the rights of the student in assessing his / her knowledge, skills and competences are addressed by a written complaint to Deputy Minister of Education, Rector of QA.

The exam materials are kept and the students are given an opportunity to get acquainted with them and the grounds for evaluation according to a procedure and procedure announced in advance. The period during which the students have access to the exam materials and results is not longer than 3 (three) working days after the exam date.

Characteristics of the discipline is provided to the student at the beginning of the course. This is in accordance with the NEA Art. 56. par. 1 "teachers are required to develop and publicize in an appropriate manner and description of the lecture course, including the titles and sequence of the topics, the reference literature, the way of forming the assessment and the form of verification of the knowledge and skills."

Академичният стандарт за учебната дисциплина е утвърден посредством Решение на КС ( Протокол № 4 от 18.02.2021 ) и се публикува на сайта на ФДМ- Пловдив.

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