# MINISTRY OF HEALTH OF UKRAINE KHARKIV NATIONAL MEDICAL UNIVERSITY

Department of \_\_\_\_\_ Orthopedic Dentistry \_\_\_\_\_

Academic year \_\_\_\_\_ 2021-2022 \_\_\_\_\_

# SYLLABUS OF THE DISCIPLINE

| "ORTI | HOP | E | D | IC | DEN | TISTRY" |
|-------|-----|---|---|----|-----|---------|
|       | ,   | 0 |   |    |     |         |

(name of educational component)

Normative or selective educational component\_\_\_\_\_Basic\_\_\_\_\_

Educational component format \_\_\_\_\_ Mixed\_

(full-time; mixed; distance)

Specialty \_\_\_\_\_\_ 221 "Dentistry", the second (master's) level (code and name of the specialty)

Educational and professional program (educational and scientific program) \_\_\_\_Dentistry"\_\_\_\_\_

The second (master's) level of higher education

Course \_\_\_\_\_\_ III \_\_\_\_\_

The syllabus of the discipline was considered at the meeting of the department orthopedic dentistry\_\_\_\_\_

"30" August 2021 № 14

Approved by the methodical commission of KhNMU on problems dental profile

(name) Protocol from "02" September 2021 year № 4

Head

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Ruzin G.P .

Yanishen IV. (signature) (surname and initials)

Protocol from

Head of Department

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## Associate Professor

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3. Krychka Natalia Vasylivna, Associate Professor of Prosthetic Dentistry

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#### **INTRODUCTION**

**The syllabus of the discipline** "Orthopedic Dentistry" is compiled in accordance with the educationalprofessional program (hereinafter - OPP) "Dentistry" and the Standard of Higher Education of Ukraine (hereinafter - the Standard), the second (master's) level, field of knowledge 22 "Health", specialty 221 Dentistry ".

**Description of the discipline (abstract)** This discipline, a separate course of which is to gain knowledge of examination and diagnosis of defects of hard tissues of teeth and small partial defects of the dentition and allows students to master in the clinic certain dental manipulations used in the treatment of patients with these pathologies. The spread of such problems in modern society and the need to remove them only in an orthopedic clinic makes it necessary to study methods of treatment of these defects with different designs of microprostheses and the basis of classical methods and modern ones. The special (professional) competencies acquired in this way are further used by educators in the process of treatment of orthopedic dental patients together with acquaintance with the organization and work of clinical offices, preparation of the necessary documentation.

The course covers the main practical and theoretical aspects of the future dentist.

The subject study of the discipline is orthopedic treatment of diseases of the dental apparatus:

- defects of the coronal part of individual teeth

- partial loss of teeth.

**Interdisciplinary connections**: The study involves the prior mastering of disciplines in medical biology, normal and pathological anatomy, histology, embryology and cytology of normal and pathological physiology, bioorganic and inorganic chemistry, biochemistry, medical physics, microbiology, materials science in dentistry, dentistry, propaedeutics , propaedeutics of pediatric therapeutic dentistry, general hygiene.

**Prerequisites.** The study of the discipline involves the prior mastering of disciplines in medical biology, normal and pathological anatomy, histology, embryology and cytology of normal and pathological physiology, bioorganic and inorganic chemistry, biochemistry, medical physics, microbiology, materials science in dentistry, dentistry, propaedeutics propaedeutics of pediatric therapeutic dentistry, general hygiene.

**Postrequisites.** The main provisions of the discipline should be applied in the study of related disciplines for 5 years of study, is the basis for preparation for the licensing exam EDKI, preparation for study in higher education institutions in the programs of the third educational and scientific level of higher education.

Link to the discipline page in MOODLE http://distance.knmu.edu.ua/course/index.php?categoryid=234

### 1. PURPOSE AND TASKS OF THE COURSE

**1.1. The purpose of teaching the discipline** "Orthopedic dentistry" is a professional formation of a future specialist who is able to solve clinical problems using the acquired knowledge and skills in the discipline, which involves the integration of teaching the discipline with therapeutic, surgical and pediatric dentistry.

**1.2. The main tasks of studying the discipline** "Orthopedic dentistry" is the acquisition by students of competencies in accordance with the general and professional competencies of the educational-professional program "Dentistry" of the second level of higher education in the specialty 221 Dentistry (discipline "Orthopedic Dentistry").

**1.3. Competences and learning outcomes,** the formation of which is facilitated by the discipline (relationship with the normative content of training of higher education, formulated in terms of learning outcomes in the OPP and Standard).

**1.3.1.** The study of the discipline provides students with the acquisition of competencies:

In accordance with the requirements of the standard, the discipline provides education for students

## – integral:

ability to solve typical and complex specialized tasks and practical problems in professional activities in the field of health care, or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.

## general:

ability to abstract thinking, analysis and synthesis; ability to apply knowledge in practice; skills of using information and communication technologies; ability to search, process and analyze information from various sources; ability to adapt and act in a new situation; ability to work in a team; ability to preserve and increase moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies. active recreation and leading a healthy lifestyle.

- special (professional, subject):

ability to collect medical information about the patient and analyze clinical data; ability to diagnose: determine the preliminary, clinical, final, concomitant diagnosis, emergencies; ability to plan and carry out measures for the prevention of diseases of organs and tissues of the oral cavity and maxillofacial region; ability to determine the tactics of management of patients with diseases of organs and tissues of the oral cavity and maxillofacial region with concomitant somatic diseases; ability to perform medical and dental manipulations; ability to treat major diseases of organs and tissues of the oral cavity and maxillofacial region; ability to determine tactics, methods and provide emergency medical care; ability to organize and conduct screening examinations in dentistry; ability to maintain regulatory medical records; ability to organize and conduct rehabilitation measures and care for patients with diseases of the oral cavity and SLE; ability to provide legal support for one's own professional activity. ability to provide home care according to the protocols of tactical medicine.

**1.3.2.** The study of the discipline ensures the acquisition by students of the following program learning outcomes:

The course covers the main aspects of training a future orthopedic dentist.

According to the training program in the discipline "Orthopedic Dentistry" the applicant will acquire theoretical knowledge, methodological training, practical skills and abilities in the following areas:

1. Identify and identify the leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's anamnesis, data of the patient's examination, knowledge about the person, his organs and systems, to establish a probable nosological or syndromic preliminary clinical diagnosis of a dental disease (according to list 2).

2. Collect information about the general condition of the patient, assess the psychomotor and physical development of the patient, the condition of the maxillofacial organs, based on the results of laboratory and instrumental studies to assess information about the diagnosis (list 5).

3. Prescribe and analyze additional (mandatory and optional) methods of examination (laboratory, radiological, functional and / or instrumental) according to list 5, patients with diseases of organs and tissues of the oral cavity and maxillofacial region for differential diagnosis of diseases ( for list 2).

4.Determine the final clinical diagnosis in accordance with the relevant ethical and legal norms, by making an informed decision and logical analysis of the obtained subjective and objective data of clinical, additional examination, differential diagnosis under the supervision of a physician-manager in a medical institution (according to list 2.1).

5. Establish a diagnosis of emergencies under any circumstances (at home, on the street, in a medical institution), in an emergency, martial law, lack of information and limited time (according to list 4).

6. Plan and implement measures for the prevention of dental diseases among the population to prevent the spread of dental diseases.

8.Determine the approach, plan, type and principle of treatment of dental disease (according to list 2) by making an informed decision according to existing algorithms and standard schemes.

11. Carry out treatment of the main dental diseases according to the existing algorithms and standard schemes under the control of the doctor-manager in the conditions of medical institution (according to the list 2.1).

13.Determine the tactics of emergency medical care, using the recommended algorithms, under any circumstances on the basis of a diagnosis of emergency in a limited time (according to list 4).

17. Adhere to a healthy lifestyle, use the techniques of self-regulation and self-control.

19. Adhere to the requirements of ethics, bioethics and deontology in their professional activities.

21. Perform medical manipulations on the basis of preliminary and / or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 6).

23. Manipulate the provision of emergency medical care, using standard schemes, under any circumstances on the basis of a diagnosis of emergency (according to list 4) in a limited time (according to lists 6, 7).

**1.3.3.** The study of the discipline provides students with the following social skills (Soft skills):

- communicativeness (realized through: the method of group work and brainstorming during the analysis of clinical cases, the method of presenting the results of independent work and their protection in the group),
- teamwork (implemented through: group work method and brainstorming during the analysis of clinical cases),
- conflict management (implemented through: business games),
- time management (implemented through: the method of self-organization during classroom work in groups and independent work),
- leadership skills (implemented through: the method of presenting the results of independent work and their defense in the group).

# 2. INFORMATION SCOPE OF THE COURSE

# 2.1 Description of the discipline

| Name of indicators         | Field of knowledge, direction of training, educational and | Characteristics of the discipline |                       |  |
|----------------------------|--|-----------------------------------|-----------------------|--|
|                            | qualification level  | full-time<br>education            | evening form of study |  |
|                            | Training direction   |                                   | ·                     |  |
| Number of credits - 5.5    | 22 "Health care"   | Normative                         |                       |  |
| Number of creaks - 5.5     | (code and name)  |                                   |                       |  |
|                            |  | Year of p                         | oreparation:          |  |
| The total number of hours  | Specialty:   | 3rd                               | -and                  |  |
| is 165                     | 221 "Dentistry»  | Semester                          |                       |  |
| 15 105                     | (code and name)  | 5.6th                             | -and                  |  |
|                            |  | Lectures                          |                       |  |
|                            |  | 20 years                          | year                  |  |
|                            |  | Practical, seminar                |                       |  |
| Hours for day (or evening) |  | 100 years                         | year                  |  |
| form of study:             | Education level:   | Laboratory                        |                       |  |
| classrooms - 120           | The second (master's) level<br>OPP                         | year                              | year                  |  |
| independent student work - | Dentistry  | Individual work                   |                       |  |
| 45                         |  | 45 years                          | year                  |  |
|                            |  | Individual tasks: year            |                       |  |
|                            |  | Type of co                        | ntrol diff. test      |  |

# 2.2.1 Lectures

| Nº<br>s∕n | Name topics  | Number<br>hours | Type of lecture |
|-----------|--|-----------------|-----------------|
| 57 11     |  | nouis           | locture         |
|           | "Non-removable dentures"   |                 |                 |
| 1.        | Examination of patients in the clinic of orthopedic dentistry. Clinical  | 2               |                 |
|           | analysis of occlusion.   |                 |                 |
| 2.        | Anesthesia in the clinic of orthopedic dentistry   | 2               |                 |
| 3.        | Indications for replacement of hard tissue defects with tabs and pin structures.   | 2               |                 |
| 4.        | Indications and clinical and technological stages of manufacturing artificial crowns.  | 2               |                 |
| 5.        | Indications and clinical and technological stages of manufacturing bridge prostheses   | 2               |                 |
|           | Together   | 10              |                 |
|           | "Partial removable prosthetics"  |                 |                 |
| 1.        | Partial absence of teeth. The condition of the dentition in which<br>prosthetics with removable dentures are required. Types and designs of<br>dentures. | 2               |                 |
| 2.        | Biological and clinical bases of partial plate prosthetics with eye prostheses. Laboratory stages of their manufacture.                                  | 2               |                 |

| 3. | Biological and clinical bases of clasp prosthetics. Components. Basics of planning the design of clasp prostheses.                                 | 2  |  |
|----|--|----|--|
| 4. | Adaptation to removable dentures when replacing partial defects of the dentition. Errors and complications in the manufacture of clasp prostheses. | 2  |  |
| 5. | Errors and complications at the stages of orthopedic treatment with partial removable plastic prostheses and clasp prostheses.                     | 2  |  |
|    | Together   | 10 |  |
|    | Total hours of discipline  | 20 |  |

# 2.2.2 Seminars

| N₀<br>s/n | Name topics      | Number<br>hours | Teaching<br>methods | Forms of control |
|-----------|------------------|-----------------|---------------------|------------------|
| 1         |                  | nouis           | methods             | control          |
| 2         |                  |                 |                     |                  |
|           |                  |                 |                     |                  |
|           | Hours in general |                 |                     |                  |

## 2.2.3 Practical classes

| N₂    | Name topics  | Number | Teaching methods  | Forms of control   |
|-------|--|--------|---|--|
| s / n | _  | hours  | -   |  |
| 1     | Examination of the patient in<br>the clinic of orthopedic<br>dentistry. Components of the<br>masticatory system, their<br>characteristics. Types of<br>occlusions, their<br>characteristics and signs. | 4      | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 2     | Anesthesia in the clinic of orthopedic dentistry.  | 4      | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 3     | FINAL LESSON   | 4      | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 4     | Replacement of hard tissue defects with tabs and pin structures.   | 4      | Narrative-explanation,<br>conversation, lecture,<br>illustration,   | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;   |

|   |   |   | demonstration,  | individual tasks; abstracts;   |
|---|---|---|---|--|
|   |   |   | presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method.  | mutual control; self-control;<br>report; declamation; poster<br>report and others.   |
| 5 | Clinical and laboratory stages<br>of production of stamped and<br>plastic crowns.                   | 4 | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 6 | Clinical and laboratory stages<br>of production of solid and<br>combined crowns.                    | 4 | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 7 | FINAL LESSON  | 4 | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 8 | Clinical and laboratory stages<br>of manufacturing stamped-<br>soldered bridges.                    | 4 | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 9 | Clinical and laboratory stages<br>of production of solid and<br>solid combined combined<br>bridges. | 4 | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case  | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |

| r  | l .   | 1 |   |   |
|----|---|---|---|---|
|    |   |   | method, project method,                       |   |
|    |   |   | debate, brainstorming method.                 |   |
| 10 | Complications and errors in                     | 4 | Narrative-explanation,                        | Oral interview (individual and                                |
| 10 | prosthetics with bridges.                       | - | conversation, lecture,                        | frontal); written survey; test                                |
|    | prostiteties with oridges.                      |   | illustration,                                 | control; creative tasks;                                      |
|    |   |   | demonstration,                                | individual tasks; abstracts;                                  |
|    |   |   | presentation, videos,                         | mutual control; self-control;                                 |
|    |   |   | videos, discussion,                           | report; declamation; poster                                   |
|    |   |   | modeling of processes                         | report and others.  |
|    |   |   | and situations, case method, project method,  |   |
|    |   |   | debate, brainstorming                         |   |
|    |   |   | method.                                       |   |
| 11 | FINAL LESSON                                    | 4 | Narrative-explanation,                        | Oral interview (individual and                                |
|    |   |   | conversation, lecture,                        | frontal); written survey; test                                |
|    |   |   | illustration,                                 | control; creative tasks;                                      |
|    |   |   | demonstration,                                | individual tasks; abstracts;                                  |
|    |   |   | presentation, videos, videos, discussion,     | mutual control; self-control;<br>report; declamation; poster  |
|    |   |   | modeling of processes                         | report and others.  |
|    |   |   | and situations, case                          | L   |
|    |   |   | method, project method,                       |   |
|    |   |   | debate, brainstorming                         |   |
| 10 | Examination of a retired - 14                   | 4 | method.                                       | Onel interview (individual a l                                |
| 12 | Examination of a patient with                   | 4 | Narrative-explanation, conversation, lecture, | Oral interview (individual and frontal); written survey; test |
|    | partial defects of the dentition.               |   | illustration,                                 | control; creative tasks;                                      |
|    | Support teeth, requirements for abutment teeth. |   | demonstration,                                | individual tasks; abstracts;                                  |
|    | for adulment teetn.                             |   | presentation, videos,                         | mutual control; self-control;                                 |
|    |   |   | videos, discussion,                           | report; declamation; poster                                   |
|    |   |   | modeling of processes                         | report and others.  |
|    |   |   | and situations, case method, project method,  |   |
|    |   |   | debate, brainstorming                         |   |
|    |   |   | method.                                       |   |
| 13 | Determination and fixation of                   | 4 | Narrative-explanation,                        | Oral interview (individual and                                |
|    | central occlusion in I, II, III                 |   | conversation, lecture,                        | frontal); written survey; test                                |
|    | groups of Betelmann defects.                    |   | illustration,                                 | control; creative tasks;                                      |
|    |   |   | demonstration,<br>presentation, videos,       | individual tasks; abstracts;<br>mutual control; self-control; |
|    |   |   | videos, discussion,                           | report; declamation; poster                                   |
|    |   |   | modeling of processes                         | report and others.  |
|    |   |   | and situations, case                          | *   |
|    |   |   | method, project method,                       |   |
|    |   |   | debate, brainstorming                         |   |
| 14 | Placement of teeth in partial                   | 4 | method.<br>Narrative-explanation,             | Oral interview (individual and                                |
| 14 | removable dentures. Checking                    | 4 | conversation, lecture,                        | frontal); written survey; test                                |
|    | the design of partial                           |   | illustration,                                 | control; creative tasks;                                      |
|    | removable dentures.                             |   | demonstration,                                | individual tasks; abstracts;                                  |
|    |   |   | presentation, videos,                         | mutual control; self-control;                                 |
|    |   |   | videos, discussion,                           | report; declamation; poster                                   |
|    |   |   | modeling of processes                         | report and others.  |
|    |   |   | and situations, case method, project method,  |   |
|    |   |   | debate, brainstorming                         |   |
|    |   |   | method.                                       |   |
| 15 | Technology of manufacturing                     | 4 | Narrative-explanation,                        | Oral interview (individual and                                |
|    |   |   | conversation, lecture,                        | frontal); written survey; test                                |

|    | nontial comparable alt           |   | illustration                                     | control creative (-1   |
|----|----------------------------------|---|--|--|
|    | partial removable plate          |   | illustration,<br>demonstration,                  | control; creative tasks;<br>individual tasks; abstracts;     |
|    | prostheses.                      |   | presentation, videos,                            | mutual control; self-control;                                |
|    |                                  |   | videos, discussion,                              | report; declamation; poster                                  |
|    |                                  |   | modeling of processes                            | report and others.   |
|    |                                  |   | and situations, case                             | r  |
|    |                                  |   | method, project method,                          |  |
|    |                                  |   | debate, brainstorming                            |  |
|    |                                  |   | method.  |  |
| 16 | Imposition of a partial          | 4 | Narrative-explanation,                           | Oral interview (individual and                               |
|    | removable plate prosthesis.      |   | conversation, lecture,                           | frontal); written survey; test                               |
|    | Correction of partial plate      |   | illustration,                                    | control; creative tasks;                                     |
|    | prostheses.                      |   | demonstration,                                   | individual tasks; abstracts;                                 |
|    | r                                |   | presentation, videos,                            | mutual control; self-control;                                |
|    |                                  |   | videos, discussion,                              | report; declamation; poster                                  |
|    |                                  |   | modeling of processes                            | report and others.   |
|    |                                  |   | and situations, case                             |  |
|    |                                  |   | method, project method,<br>debate, brainstorming |  |
|    |                                  |   | method.  |  |
| 17 | Errors and complications of      | 4 | Narrative-explanation,                           | Oral interview (individual and                               |
|    | FAQ. FINAL LESSON.               |   | conversation, lecture,                           | frontal); written survey; test                               |
|    |                                  |   | illustration,                                    | control; creative tasks;                                     |
|    |                                  |   | demonstration,                                   | individual tasks; abstracts;                                 |
|    |                                  |   | presentation, videos,                            | mutual control; self-control;                                |
|    |                                  |   | videos, discussion,                              | report; declamation; poster                                  |
|    |                                  |   | modeling of processes                            | report and others.   |
|    |                                  |   | and situations, case                             |  |
|    |                                  |   | method, project method,                          |  |
|    |                                  |   | debate, brainstorming                            |  |
| 18 | Replacement of partial defects   | 4 | method.<br>Narrative-explanation,                | Oral interview (individual and                               |
| 10 |                                  | + | conversation, lecture,                           | frontal); written survey; test                               |
|    | <b>5</b> 1                       |   | illustration,                                    | control; creative tasks;                                     |
|    | dentures.                        |   | demonstration,                                   | individual tasks; abstracts;                                 |
|    |                                  |   | presentation, videos,                            | mutual control; self-control;                                |
|    |                                  |   | videos, discussion,                              | report; declamation; poster                                  |
|    |                                  |   | modeling of processes                            | report and others.   |
|    |                                  |   | and situations, case                             |  |
|    |                                  |   | method, project method,                          |  |
|    |                                  |   | debate, brainstorming                            |  |
|    |                                  |   | method.  |  |
| 19 | Parallelometry. Classification   | 4 | Narrative-explanation,                           | Oral interview (individual and                               |
|    | of staples, indications for use. |   | conversation, lecture,                           | frontal); written survey; test                               |
|    |                                  |   | illustration,                                    | control; creative tasks;                                     |
|    |                                  |   | demonstration,                                   | individual tasks; abstracts;                                 |
|    |                                  |   | presentation, videos, videos, discussion,        | mutual control; self-control;<br>report; declamation; poster |
|    |                                  |   | modeling of processes                            | report and others.   |
|    |                                  |   | and situations, case                             | report and others.   |
|    |                                  |   | method, project method,                          |  |
|    |                                  |   | debate, brainstorming                            |  |
|    |                                  |   | method.  |  |
| 20 | Technological stages of          | 4 | Narrative-explanation,                           | Oral interview (individual and                               |
|    | making clasp prostheses.         |   | conversation, lecture,                           | frontal); written survey; test                               |
|    | Preparing the model for          |   | illustration,                                    | control; creative tasks;                                     |
|    | duplication.                     |   | demonstration,                                   | individual tasks; abstracts;                                 |
|    |                                  |   | presentation, videos,                            | mutual control; self-control;                                |
|    |                                  |   | videos, discussion,                              | report; declamation; poster                                  |
|    |                                  |   | modeling of processes                            | report and others.   |

|       |  |   | and situations, case  | []   |
|-------|--|---|---|--|
|       |  |   | method, project method,   |  |
|       |  |   | debate, brainstorming method.   |  |
| 21    | Modeling of the clasp<br>prosthesis frame.                 | 4 | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 22    | Fitting the frame of the clasp                             | 4 | Narrative-explanation,  | Oral interview (individual and   |
|       | prosthesis.  |   | conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method.                           | frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others.                                   |
| 23    | Comparative characteristics of partial removable dentures. | 4 | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 24    | Adaptation to clasp prostheses. FINAL LESSON.              | 4 | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| 25    | DIFFERENTIATED SET-<br>OFF.                                | 4 | Narrative-explanation,<br>conversation, lecture,<br>illustration,<br>demonstration,<br>presentation, videos,<br>videos, discussion,<br>modeling of processes<br>and situations, case<br>method, project method,<br>debate, brainstorming<br>method. | Oral interview (individual and<br>frontal); written survey; test<br>control; creative tasks;<br>individual tasks; abstracts;<br>mutual control; self-control;<br>report; declamation; poster<br>report and others. |
| Total | -  |   | 100   |  |

# 2.2.4. Laboratory classes

| N⁰  | Name topics      | Number | Teaching methods | Forms of |
|-----|------------------|--------|------------------|----------|
| s / |                  | hours  | methods          | control  |
| n   |                  |        |                  |          |
| 1   |                  |        |                  |          |
| 2   |                  |        |                  |          |
|     |                  |        |                  |          |
|     | Hours in general |        |                  |          |

# 2.2.5. Individual work

| N⁰<br>s /<br>n | Subject to take   | Number<br>hours | Teaching methods  | Forms of control   |
|----------------|---|-----------------|---|--|
| 1              | <b>Independent lesson. Topic</b><br><b>1.1.</b> Curation of the patient and<br>filling in medical<br>documentation.   | 4               | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio<br>method; self-control;<br>report; declamation; poster<br>report and others. |
| 2              | <b>Independent lesson. Topic</b><br><b>3.1.</b> Anesthesia in the clinic of<br>orthopedic dentistry. Possible<br>complications and methods of<br>their elimination.   | 4               | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio<br>method; self-control;<br>report; declamation; poster<br>report and others. |
| 3              | <b>Independent lesson. Topic</b><br><b>4.1.</b> Pathology of the hard tissues of the tooth. Etiology, clinic.   | 4               | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio<br>method; self-control;<br>report; declamation; poster<br>report and others. |
| 4              | <b>Independent lesson. Topic</b><br><b>4.2.</b> Clinical and laboratory<br>stages of making tabs by direct<br>and indirect methods. Features<br>of formation of carious cavities<br>of I-V classes according to<br>Black. | 4               | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio<br>method; self-control;<br>report; declamation; poster<br>report and others. |
| 5              | <b>Independent lesson. Topic</b><br><b>7.1</b> Disinfection and<br>sterilization of tools, prints.<br>Prevention of the spread of<br>infectious diseases in the<br>dental clinic.   | 5               | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio<br>method; self-control;<br>report; declamation; poster<br>report and others. |
|                | s in general  | 21              |   |  |
| 1              | <b>Independent lesson. Topic</b><br><b>13.1.</b> Classification of dentition<br>defects according to Kennedy,<br>taking into account the<br>additions of Apligat.   | 4               | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio method;<br>self-control; report;<br>declamation; poster report<br>and others. |

| 2   | <b>Independent lesson. Topic</b><br><b>13.2.</b> Additional methods<br>(special) examination.  | 4  | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio method;<br>self-control; report;<br>declamation; poster report<br>and others. |  |
|-----|--|----|---|--|--|
| 3   | <b>Independent lesson. Topic</b><br><b>15.1.</b> Types of occlusions,<br>their characteristics and signs.<br>Methods for fixing the mesio-<br>distal position of the mandible<br>in central occlusion. | 4  | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio method;<br>self-control; report;<br>declamation; poster report<br>and others. |  |
| 4   | <b>Independent lesson. Topic</b><br><b>16.1.</b> Types of gypsum wax<br>composition in the ditch.<br>Indication.   | 4  | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio method;<br>self-control; report;<br>declamation; poster report<br>and others. |  |
| 5   | <b>Independent lesson. Topic</b><br><b>18.1</b> Basics of working with the articulator.  | 4  | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio method;<br>self-control; report;<br>declamation; poster report<br>and others. |  |
| 6   | <b>Independent lesson. Topic</b><br><b>25.1</b> Modern types of<br>impression materials.   | 2  | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio method;<br>self-control; report;<br>declamation; poster report<br>and others. |  |
| 7   | <b>Independent lesson. Topic</b><br><b>29.1</b> Types of porosity of base<br>plastic and their<br>characteristics. Prevention.   | 2  | Study and analysis of basic<br>and auxiliary literature,<br>videos, videos, discussion,<br>case method,<br>"Brainstorming", webinar,<br>virtual consultation. | Oral interview; creative<br>tasks; individual tasks;<br>abstracts; portfolio method;<br>self-control; report;<br>declamation; poster report<br>and others. |  |
| Hou | rs in general  | 24 |   |  |  |
|     | l hours of discipline  | 45 |   |  |  |

#### **3. EVALUATION CRITERIA**

**3.1.** Evaluation of the success of education of students is carried out on the basis of the current "Instructions for evaluating the educational activities of students of KhNMU"

## Evaluation of current and general educational activities (IPA)

IPA is considered fulfilled if the applicant in the current semester has completed all the missed classes and lectures, and the average score for all topics of the PC is 3 points or higher, in which case the statement is marked "completed" and indicates the average score in 4-point system ( is calculated automatically within the functionality of the electronic journal of ACS), or "unfinished", if the applicant in the current semester has unfinished missed classes and lectures, or an average score below 3 points.

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Final score for **HDPE** in the semester is defined as the arithmetic mean of national grades for each lesson and PC, rounded to 2 decimal places and converted into a multi-point scale according to Table 1 in accordance with "Instructions for evaluating the educational activities of higher education seekers in KhNMU ».

General educational activity (CIS) is considered completed if the applicant has completed all the missed classes and lectures, and the average score for all PC topics is equal to 3 points and above. CIS scores for disciplines with the form of control "differentiated credit" are calculated as the arithmetic mean of PC scores for all topics of all semesters, during the entire period of study of the discipline (to the nearest hundredth) according to table 1 "Conversion of average score for current control within the functionality of the electronic journal of the ACS. FAR is defined in points from 70 to 120. FAR is defined in points from 120 to 200.

Table 1

|               | 200-point | 4-point scale | 200-point  |
|---------------|-----------|---------------|------------|
| 4-point scale | scale     |               | scale      |
| 5             | 120       | 3.91-3.94     | 94         |
| 4.95-4.99     | 119       | 3.87-3.9      | 93         |
| 4.91-4.94     | 118       | 3.83- 3.86    | 92         |
| 4.87-4.9      | 117       | 3.79- 3.82    | 91         |
| 4.83-4.86     | 116       | 3.74-3.78     | 90         |
| 4.79-4.82     | 115       | 3.7- 3.73     | 89         |
| 4.75-4.78     | 114       | 3.66- 3.69    | 88         |
| 4.7-4.74      | 113       | 3.62- 3.65    | 87         |
| 4.66-4.69     | 112       | 3.58-3.61     | 86         |
| 4.62-4.65     | 111       | 3.54- 3.57    | 85         |
| 4.58-4.61     | 110       | 3.49- 3.53    | 84         |
| 4.54-4.57     | 109       | 3.45-3.48     | 83         |
| 4.5-4.53      | 108       | 3.41-3.44     | 82         |
| 4.45-4.49     | 107       | 3.37-3.4      | 81         |
| 4.41-4.44     | 106       | 3.33- 3.36    | 80         |
| 4.37-4.4      | 105       | 3.29-3.32     | 79         |
| 4.33-4.36     | 104       | 3.25-3.28     | 78         |
| 4.29-4.32     | 103       | 3.21-3.24     | 77         |
| 4.25-4.28     | 102       | 3.18-3.2      | 76         |
| 4.2- 4.24     | 101       | 3.15-3.17     | 75         |
| 4.16-4.19     | 100       | 3.13- 3.14    | 74         |
| 4.12-4.15     | 99        | 3.1-3.12      | 73         |
| 4.08-4.11     | 98        | 3.07- 3.09    | 72         |
| 4.04- 4.07    | 97        | 3.04-3.06     | 71         |
| 3.99-4.03     | 96        | 3.0-3.03      | 70         |
| 3.95-3.98     | 95        | Less 3        | Not enough |

# Recalculation of the average score for current activities in a multi-point scale (for disciplines ending in d / c)

**Conducting and evaluating differentiated credit.** For disciplines, the form of control is "differentiated credit" it is assumed that the admission to the DR is calculated in points of CIS from 70 to 120 points. Directly DZ is estimated from 50 to 80 points.

Differentiated credit is made by the teacher of the group, or another teacher of the department at the last practical lesson, the recalculation of points is in accordance with table 7, according to "Instructions for evaluating the educational activities of higher education seekers in KhNMU ».

|                     |     |     | If they are presented in one tieket |   |
|---------------------|-----|-----|-------------------------------------|---|
| Number of questions | «5» | «4» | «3»                                 | Answer for tickets, which include For each answer the student theoretical and practical parts of the receives from 10 to 16 points, |
| 1                   | 16  | 13  | 10                                  | discipline which corresponds to:  |
| 2                   | 16  | 13  | 10                                  | "5" - 16 points;  |
| 3                   | 16  | 13  | 10                                  | "4" - 13 points;  |
| 4                   | 16  | 13  | 10                                  | "3" - 10 points.  |
| 5                   | 16  | 13  | 10                                  |   |
|                     | 80  | 65  | 50                                  |   |

Assessment of theoretical knowledge and practical skills, if they are presented in one ticket

#### Grade from the discipline

For disciplines, the form of control is "differentiated credit" it is assumed that the admission to the DR is calculated in points of CIS from 70 to 120 points. Directly DZ is estimated from 50 to 80 points. The grade in the discipline is the sum of points for ZND, IZZ and DZ and ranges from 120 to 200 points.

After conducting semester control for the discipline, ending with the form of control "differentiated test", responsible for the organization of educational and methodical work at the department or the teacher is exhibited to the applicant the relevant assessment according to table 3 "Assessment scale in KhNMU", which is attached (Annex 3) to the individual curriculum of the student and fills in the progress of the discipline, according to "Instructions for evaluating the educational activities of higher education seekers in KhNMU ».

Table 3

# Evaluation scale at KhNMU

| Rating               | Assessment on the ECTS | Score for        |
|----------------------|------------------------|------------------|
| on a 200-point scale | scale                  | four-point scale |
| 180–200              | AND                    | Perfectly        |
| 160–179              | IN                     | Fine             |
| 150–159              | WITH                   | Fine             |
| 130–149              | D                      | Satisfactorily   |
| 120–129              | Е                      | Satisfactorily   |
| Less than 120        | F, Fx                  | Unsatisfactorily |

#### 3.2. Questions for credit and exam:

#### Semester 5 "Fixed dentures"

- 1. Examination of patients in orthopedic dentistry stages, basic and additional methods of examination, medical documentation.
- 2. Stage of subjective examination. Pathological conditions and somatic diseases that are risk factors at the dental office.
- 3. Examination of the temporomandibular joint (basic and additional methods).
- 4. Examination of the masticatory muscles (basic and additional methods).
- 5. Examination of the oral mucosa. Mobility and pliability of the mucous membrane. Classification by Supli.
- 6. Examination of teeth and dentitions (basic and additional methods). Classifications of dentition defects according to Kennedy and Bethelman.
- 7. Examination of periodontal tissues (basic and additional methods).
- 8. X-ray examination methods in orthopedic dentistry.
- 9. Methods of recording movements of the lower jaw.
- 10. Electromyography.
- 11. Evaluation of occlusal ratios of dentitions. Occlusiography. Electronic analysis of T-Scan occlusion.
- 12. Static and dynamic methods of chewing efficiency assessment.
- 13. Preliminary and final diagnosis. Features of diagnosis in the clinic of orthopedic dentistry. Orthopedic treatment planning.
- 14. Functional anatomy of masticatory muscles. Synergism and coordinated antagonism, the state of relative physiological rest of the masticatory muscles.
- 15. Innervation and reflex regulation of the dental apparatus.

- 16. Functional anatomy of the temporomandibular joint.
- 17. Anatomy of periodontal tissues, structure of gingival junction. Reserve and residual capacity of periodontal tissues. Physiological and pathological mobility of teeth.
- 18. Anatomy of dentitions, physiological and pathological occlusions. Factors that ensure the stability of the position of the teeth. Ways and mechanisms of redistribution of masticatory pressure, buttresses of the skull.
- 19. Anatomy of the occlusal surface of dentitions and individual teeth, sagittal and transverse occlusal curves. Anatomical and functional occlusal surface, occlusal compass ..
- 20. Biomechanics of mandibular movements. Phases of masticatory movements according to Giza. Occlusion and articulation, types of occlusion, occlusion factors.
- 21. The movement of the lower jaw in the vertical direction. Terminal hinge axis, Posset diagram.
- 22. Parameters characterizing the movement of the mandible in the sagittal direction. Sagittal articular and incisal pathways, sagittal articular and incisal angles.
- 23. Parameters characterizing the movement of the mandible in the transverse direction. Transverse articular and incisal pathways, Bennett's angle and movement, Gothic angle.
- 24. Central occlusion, occlusal contacts are normal. Classification of antagonistic surfaces by Jenkelson, the concept of stable and unstable occlusal contacts.
- 25. Anterior occlusion, normal contacts. Frontal guidance. Bonville three-point contact.
- 26. Lateral occlusion, contact options (occlusal concepts).
- 27. Supracontacts etiology, classification.
- 28. Apparatus that reproduce the movements of the lower jaw classification, scope.
- 29. The structure of articulators. Medium-anatomical articulators design features, indications for use.
- 30. Adjustable articulators design features, indications for use, methods of individual adjustment.
- 31. Ways to transfer models to the articulator.
- 32. Method of registration of the position of the upper jaw and transfer of models to the articulator using the facial arch.
- 33. Pain, mechanism of occurrence, ways of carrying out. Theories of toothache. Innervation of the maxillofacial area.
- 34. Types of anesthesia in outpatient dental practice. Indications for local anesthesia in orthopedic dentistry.
- 35. Conductive anesthesia on the upper jaw, methods.
- 36. Conductive anesthesia on the lower jaw, methods.
- 37. Methods of infiltration anesthesia in the oral cavity, indications.
- 38. Anesthesia during the preparation of the front teeth of the upper jaw.
- 39. Anesthesia during the preparation of the premolars of the upper jaw.
- 40. Anesthesia during the preparation of the molars of the upper jaw.
- 41. Anesthesia during the preparation of the front teeth of the mandible.
- 42. Anesthesia during the preparation of the premolars of the mandible.
- 43. Anesthesia during the preparation of the molars of the mandible.
- 44. Modern local anesthetics mechanism of action, classification, indications for use.
- 45. General complications of injectable anesthesia causes, ways to prevent.
- 46. Local complications of injectable anesthesia causes, ways to prevent.
- 47. Urgent conditions at the dental office allergic reactions of the immediate type. Clinical picture, first aid.
- 48. Urgent conditions at the dental office hypertensive crisis, angina pectoris, myocardial infarction. Clinical picture, first aid.
- 49. Emergencies at the dental office dizziness, collapse. Clinical picture, first aid.
- 50. Urgent conditions at the dental office an attack of bronchial asthma. Clinical picture, first aid.
- 51. Etiology of defects of the crown of the teeth. Defect classifications, Milikevich index. Types of orthopedic structures to replace defects of the crown of the teeth, indications.
- 52. Artificial crowns indications, classifications, comparative characteristics. Materials and technologies for making artificial crowns.
- 53. Preparation of the oral cavity for prosthetics. Requirements for teeth used as a support for fixed orthopedic structures.
- 54. Indications for depulping of abutment teeth. Indications for reinforcement of abutment teeth with pin structures.
- 55. Tools for tooth preparation for fixed orthopedic structures.
- 56. Rules of preparation of teeth for fixed orthopedic structures, safety measures, methods of control of depth of preparation of hard tissues.
- 57. Protection of vital teeth during and after preparation. Provisional structures, dentin sealants.
- 58. Complications during and after tooth preparation causes, consequences, ways to prevent.
- 59. Methods of preparation of teeth for artificial crowns.
- 60. Marginal adaptation of artificial crowns, options for incisal preparation, types of ledges.

- 61. Gum retraction, types, methods, indications.
- 62. Stamped metal crowns indications and contraindications, clinical stages of manufacture.
- 63. Solid metal crowns indications and contraindications, clinical stages of manufacture.
- 64. Solid combined crowns indications and contraindications, clinical stages of manufacture.
- 65. Stamped metal crowns laboratory stages of manufacture.
- 66. Solid metal crowns are laboratory stages of production.
- 67. Solid combined crowns laboratory stages of manufacture.
- 68. Provisional crowns indications, purpose, types. Materials for the manufacture of temporary crowns.
- 69. Methods of direct manufacture of temporary structures.
- 70. Laboratory method of making temporary crowns.
- 71. Acrylic plastics composition, properties, phases and modes of polymerization of plastics.
- 72. Metal alloys for the manufacture of fixed orthopedic structures classifications, properties, application technologies.
- 73. Technology of casting frames of fixed orthopedic structures. Shrinkage of alloys and methods of its compensation.
- 74. Foundry systems types, rules of construction. Methods of melting and casting of metal alloys.
- 75. Refractory masses types, composition, properties.
- 76. Technology of connection of parts of stamped-soldered constructions. Solders types, composition, properties, requirements. Fluxes. Solderless method of connecting parts of bridges.
- 77. Gypsum types, composition, properties.
- 78. Alginate impression masses composition, properties, indications, technology of application.
- 79. Silicone impression masses composition, properties, indications, methods of obtaining impressions.
- 80. Bridge prostheses indications, classifications, materials and methods of manufacture. Features of preparation of abutment teeth. Comparative characteristics of solid and stamped-brazed structures.
- 81. Biomechanics of bridge prostheses, design features, types of support elements. The relationship of the intermediate part to the alveolar process.
- 82. Indications, clinical stages of prosthetics with solid bridge prostheses.
- 83. Indications, clinical stages of prosthetics stamped-soldered bridges.
- 84. Laboratory stages of prosthetics with solid bridge prostheses.
- 85. Laboratory stages of prosthetics stamped-soldered bridges.
- 86. Factors that ensure the fixation of fixed prostheses.

87. Indications for temporary fixation of fixed structures. Materials for temporary fixation of orthopedic structures. Provisional cements.

- 88. Zinc phosphate cements composition, physicochemical properties, indications and methods of application.
- 89. Glass ionomer cements composition, physicochemical properties, indications and methods of application.
- 90. Composite cements composition, physicochemical properties, indications and methods of application.
- 91. Errors and complications in obtaining prints. Causes, consequences, ways of prevention.
- 92. Errors and complications in tooth preparation. Causes, consequences, ways of prevention.
- 93. Errors in the laboratory stages of manufacturing stamped crowns.
- 94. Errors in the laboratory stages of manufacturing stamped and soldered bridges.
- 95. Errors in the laboratory stages of manufacturing solid crowns.
- 96. Errors in the laboratory stages of manufacturing solid bridges.
- 97. Errors in the laboratory stage of making plastic crowns.
- 98. Errors in examining patients and planning orthopedic treatment.
- 99. Errors during inspection of construction and cementation of fixed orthopedic structures

# Semester 6 "Partial removable dentures"

- 1. Basic and additional methods of examination of patients with partial tooth loss
- 2. Structural and functional changes of the dental apparatus with partial tooth loss
- 3. Anatomical formations of the oral cavity, which are important in removable prosthetics. Flexibility and mobility of the mucous membrane, their consideration in removable prosthetics. Assessment of the condition of alveolar processes in edentulous areas, Elbrecht classification
- 4. Preparation of the oral cavity for prosthetics with partial removable dentures (PZP) Requirements for abutment teeth
- 5. Constructions of ChZP, their constituent parts. Features of masticatory pressure transformation by different types of CNC
- 6. Partial removable plate prostheses indications, clinical stages of manufacture
- 7. Partial removable plate prostheses with a metal base indications, clinical stages of manufacture
- 8. Clasp prostheses indications, design planning depending on clinical conditions. Selection of abutment teeth, requirements, training
- 9. Checking the design of partial removable dentures
- 10. Planning the design of dentures while maintaining single teeth on the jaws
- 11. ChZP fixation planning. Clasp lines. Factors influencing the choice of fixing elements in removable dentures

- 12. Obtaining working prints for the manufacture of CNC materials and techniques. Indications for fingerprints with individual spoons
- 13. The concept of fixation, stabilization, balance of removable dentures and the factors that provide them
- 14. Clamps classifications, designs, manufacturing methods. Factors determining the choice of staple type
- 15. Lock fastenings (attachments) classifications, constructions, indications
- 16. Beam fastenings types, designs, indications
- 17. Telescopic mounts types, structures, indications
- 18. Boundaries of the bases of partial removable plate prostheses on the upper and lower jaws
- 19. Options for the location of clasp arches on the upper and lower jaws. Arc parameters
- 20. Groups of Betelman dentition defects, clinical characteristics
- 21. Methods for determining and fixing the central ratio of the jaws in the second group of Betelman defects
- 22. Methods for determining and fixing the central ratio of the jaws in the third group of Betelman defects. Methods for determining the occlusal height. Methods for determining the central ratio of the jaws
- 23. Method of fixing the central occlusion with occlusal blocks and gypsum blocks. Technology of production of occlusal rollers, requirements to rollers
- 24. Methods of hot and cold methods of fixing the central ratio using occlusal rollers
- 25. Errors in determining and fixing the ratio of the jaws
- 26. Artificial teeth for removable dentures materials, types. Comparative characteristics of porcelain, composite, acrylic teeth. Rules of selection of artificial teeth
- 27. Methods of placing artificial teeth in the CNC; options for placing teeth in the frontal area. Anatomical landmarks for teeth placement. Occlusal concepts in partial removable prosthetics
- 28. Technology of compression pressing of plastics. Methods of plastering reproductions of prostheses in the cuvette
- 29. Technology of foundry pressing of plastics. Equipment, materials. Directed polymerization mode
- 30. Plastics for the manufacture of denture bases. Classifications, composition, properties. Types and modes of polymerization
- 31. Errors when working with plastic, types of porosity
- 32. Methods of imposition and correction of PPP, recommendations to the patient on prosthesis care. Phases of adaptation to removable prostheses according to Courland
- 33. Parallelometry purpose, tasks, methods
- 34. Planning of fixing elements in clasp prostheses depending on clinical conditions. Calibration of models
- 35. Preparation of models for duplication. Duplicate masses types, composition, application technology. Production of refractory models
- 36. Modeling of wax reproduction of the clasp prosthesis frame. Types of gutter system, construction rules
- 37. Staple system Ney, indications for use
- 38. Classification of molding compounds, composition, properties, indications for use
- 39. Metal alloys for the manufacture of clasp prostheses and prostheses with a metal base. Cobalt-chromium alloy composition, technological and physicochemical properties, temperature regime
- 40. Shrinkage of alloys during casting, types. Methods of compensation of alloy shrinkage during casting of frames of removable and non-removable structures
- 41. Casting technology in dentistry. Methods of melting and casting of metals. Foundry systems types, rules of construction
- 42. Recommended terms of use of different types of FAQ. Indications for prosthesis replacement. Relocation of removable dentures indications, methods, materials
- 43. Repair of prostheses (replacement of a bracket, addition of a tooth, repair of basis) technology. Causes of fracture of bases
- 44. Factors of influence of prosthesis bases and prosthetic materials on prosthetic bed tissues. Classifications of prosthetic stomatitis
- 45. Traumatic prosthetic stomatitis. Etiology, clinical manifestations, differential diagnosis and treatment
- 46. Toxic prosthetic stomatitis. Etiology, clinical manifestations, differential diagnosis and treatment
- 47. Allergic prosthetic stomatitis. Etiology, clinical manifestations, differential diagnosis and treatment
- 48. Additional laboratory methods of examination of patients with prosthetic stomatitis
- 49. Errors at the stage of fixing the ratio of the jaws and determining the occlusal height
- 50. Errors in obtaining prints
- 51. Errors at the stage of manufacturing a plastic base
- 52. Errors at the stage of examination of patients and planning the design of the CHZP
- 53. Errors at the stage of casting prosthesis frames
- 54. Errors in the imposition and correction of prostheses

## List of practical skills to be tested during the final control in orthopedic dentistry.

## Semester 5 "Fixed dentures"

- 1. Examine the patient. Establish a preliminary and final diagnosis based on survey data (clinical and laboratory)
- 2. Suggest a plan for orthopedic treatment
- 3. Propose a plan to prepare the patient's oral cavity for prosthetics
- 4. Occludogram
- 5. Get an imprint for the manufacture of solid non-removable structures
- 6. Obtaining impressions for the manufacture of stamped and stamped-soldered prostheses
- 7. To fix the central occlusion at 1 group of defects by means of occlusal blocks
- 8. Determining the position of the upper jaw using the facial arch
- 9. Transfer of models to the articulator by means of a front arch
- 10. Occlusion analysis on diagnostic models in the articulator
- 11. Anesthesia during tooth preparation
- 12. Perform retraction of the gums
- 13. Preparation of teeth under a stamped metal crown
- 14. Preparation of teeth under a solid metal and combined crown
- 15. Planning the construction of a bridge prosthesis
- 16. Checking the design of artificial crowns
- 17. Checking the design of the bridge
- 18. Fixation of crowns and bridges
- 19. Removal of crowns

#### Semester 6 "Partial removable dentures"

- 1. Examine the patient. Establish a preliminary and final diagnosis based on survey data (clinical and laboratory)
- 2. Suggest a plan for orthopedic treatment
- 3. Propose a plan to prepare the patient's oral cavity for prosthetics
- 4. Obtain an anatomical impression of the lower and upper jaws for the manufacture of partial removable dentures
- 5. Determine and fix the central ratio of the jaws in 2.3 groups of defects
  - using occlusal rollers
- 6. Planning the design of a partial removable prosthesis
- 7. Carry out parallelometry of the diagnostic model and plan the clamp fixation clasp prosthesis
- 8. Checking the design of a partial removable prosthesis
- 9. Correction of a partial removable prosthesis
- 10. Relocation of a partial removable prosthesis

# LIST OF QUESTIONS FOR DIFFERENTIAL ASSESSMENTS AND EXAMS FROM THE DISCIPLINE "ORTHOPEDIC DENTISTRY"

## PROGRAM

#### differential test in orthopedic dentistry for 3rd year students of the Faculty of Dentistry

- 1. The subject of orthopedic dentistry. Content. Purpose and objectives.
  - 2. Historical stages and main directions of development of orthopedic dentistry. The role of domestic scientists.
  - 3. Relationship of orthopedic dentistry with basic, medical and other sciences.
  - 4. The main dental diseases that are subject to orthopedic treatment.
  - 5. Classification of dentition defects according to Kennedy.
  - 6. Organization of medical work of the dentist of the orthopedic department / office / dental clinic.
  - 7. Organization of medical work of the dentist of the orthopedic department.
  - 8. Safety equipment of medical staff in the orthopedic department.
  - 9. Occupational hygiene and prevention of occupational diseases of a dentist.
  - 10. Medical deontology and medical ethics in orthopedic dentistry.
  - 11. Examination of the patient in the clinic of orthopedic dentistry.
  - 12. Outpatient medical history of a dental patient. Filling method.
  - 13. Statistical methods for determining masticatory efficiency.
  - 14. Functional test on IO Ruby. Method of determination.
  - 15. Graphic methods for studying the masticatory movements of the mandible. Mastication.
  - 16. Study of masticatory muscle function. Myotonometry. Electromyography.
  - 17. X-ray examinations of the maxillofacial area in the orthopedic department.

- 18. Curation of patients. Rules of admission of patients in outpatient treatment.
- 19. Chewing efficiency. Statistical methods for determining masticatory efficiency by II Agapov and IM Oxman.
- 20. Preparation of teeth and dentitions of the patient's oral cavity for prosthetics / general and special /.
- 21. Indications for tooth extraction surgery in preparation for orthopedic treatment.
- 22. Contents and formulation of the diagnosis in the clinic of orthopedic dentistry.
- 23. Orthopedic treatment plan and prosthetic tasks.
- 24. Facial anatomy. Anthropometric and anatomical features depending on the type of bite.
- 25. Bones of the maxillofacial skeleton. The relationship of form and function. Buttresses.

26. Organs of the dental system. Its functions. The relationship of form and function as an example of dialectical unity.

27. Groups of teeth of permanent occlusion and their anatomical and functional characteristics. Functionally oriented groups of teeth.

28. Dental arches, their shape on the upper and lower jaws. Occlusal curves and occlusal surface. The concept of dental, alveolar and basal arches.

29. Classification of bites. Concept. Determination of occlusion, occlusion height.

30. Periodontium and its function. Factors that ensure the endurance of the dentition. Reserve forces of the periodontium.

- 31. Orthognathic occlusion, its characteristics.
- 32. Definition of "articulation" and "occlusion". Types of occlusions.
- 33. Open bite. Its characteristics.
- 34. Deep bite. Its characteristics.
- 35. Cross bite. Its characteristics.
- 36. Bite height and height of physiological rest of the mandible.
- 37. Chewing apparatus reflexes. Their role in coordinating the movements of the lower jaw.
- 38. The mucous membrane of the oral cavity and its function.

39. Chewing muscles. Their function. Absolute strength of masticatory muscles, masticatory stamping. Ways of transmission of chewing embossing.

40. Definition of "chewing force" and "chewing embossing". The phenomenon of antagonism and synergism of the masticatory muscles.

- 41. Facial muscles. Their function and significance in human sociality.
- 42. Soft palate and its functions. Chewing and swallowing.
- 43. Temporomandibular joint of man. Anatomy, function, structure features.

44. Comparative characteristics of the anatomy and function of the temporomandibular joint of humans and animals.

- 45. Odontoparodontogram by V.Yu. Courland. Characteristic. Assembly methods.
- 46. Articulation and occlusion. Definition of the concept. Types of occlusion. Their characteristics. Bite.
- 47. Biomechanics of the mandible. Sagittal movements of the lower jaw.
- 48. Biomechanics of the mandible. Transverse movements of the lower jaw.
- 49. Biomechanics of the mandible. Vertical movements of the lower jaw.
- 50. Basic structural dental materials. Classification, requirements for them.
- 51. Fusion of metals for dentures. Their characteristics.
- 52. Basic plastics. Characteristics and methods of plastic preparation.
- 53. The polymerization mode of base plastics. Variety of porosity. Reasons. Prevention.
- 54. Artificial teeth made of plastic and porcelain. Equalization characteristic. Selection of teeth size and color.

55. Replacement of the wax part of the removable prosthesis with plastic by the method of reverse gypsum in the ditch.

56. Self-hardening / fast-hardening / plastics. Characteristics and methods of preparation of plastic dough and polymerization mode.

57. Basic construction materials for plastic and combined fixed prostheses. Characteristic. Method of assembling the color of the material.

- 58. Materials for fixing fixed prostheses. Characteristic. Methods of preparation and cementation.
- 59. Waxes in orthopedic dentistry. Characteristic. Methods of their use in dental prosthetics.
- 60. Imprint materials and requirements for them. Classification of imprint materials according to Oxman, Napadov.
- 61. Medical plaster. Characteristics and methods of preparation for ogshorgrt and models.

62. Thermoplastic impression materials. Characteristic. Methods of obtaining impressions and castings of gypsum models.

63. Alginate impression materials. Characteristic. Indications for the use of methods of obtaining impressions and castings of gypsum models.

64. Silicone impression materials. Characteristic. Indications for the use of methods of obtaining impressions and castings of gypsum models.

- 66. Methods of obtaining impressions and models at the stages of orthopedic treatment.
- 67. Possible complications in obtaining fingerprints. Reasons. Prevention. First aid.
- 68. Methods for determining and fixing central occlusion in orthopedic treatment of patients.
- 69. Anesthesia in the clinic of orthopedic dentistry.
- 70. Types of dentures.

71. Indications for the treatment of defects of the hard tissues of the crown of the tooth with inlays. Classification of cavities according to Black, V. Yu. Milikevych.

- 72. Tabs: basic principles of cavity formation, manufacturing methods, principles of fitting and fixing.
- 73. Clinical and laboratory stages of orthopedic treatment with tabs by the direct method.
- 74. Clinical and laboratory stages of orthopedic treatment with tabs by indirect method.
- 75. Tooth crown defects. Etiology, clinic, methods of recovery.
- 76. Artificial crowns. Types of crowns. Indications for use.
- 77. Requirements for artificial crowns.
- 78. Indications and contraindications to the manufacture of different types of crowns.
- 79. Clinical and laboratory stages of orthopedic treatment with complete stamped crowns.
- 80. Clinical and laboratory stages of orthopedic treatment with solid crowns.
- 81. Clinical and laboratory stages of orthopedic treatment with plastic crowns.
- 82. Clinical and laboratory stages of orthopedic treatment with combined crowns (according to Belkin, Borodyuk).
- 83. Clinical and laboratory stages of orthopedic treatment with metal-ceramic crowns.

84. Complications are possible when preparing the hard tissues of the tooth for an artificial crown. Reasons. Prevention.

85. Clinical and laboratory stages of treatment of a complete defect of the crown of the tooth with an artificial crown with a pin according to Ahmedov.

- 86. Stump crowns. Indications for manufacture. Clinical and laboratory stages of treatment.
- 87. Pin teeth: classifications, indications and contraindications, design features,

88. Clinical and laboratory stages of treatment of complete defect of the crown of the tooth with pin teeth according to Ilyina-Markosyan.

- 89. Partial adentia. Violation of the functional and morphological integrity of the dentition.
- 90. Elements of bridges. Their characteristics. Requirements for the intermediate part of the bridge and support elements.

91. Clinical and laboratory stages of orthopedic treatment with non-removable stainless steel bridges with cast intermediate part.

92. Clinical and laboratory stages of orthopedic treatment with non-removable plastic prostheses.

93. Clinical and laboratory stages of orthopedic treatment with fixed bridges with combined support crowns (metal, plastic).

94. Clinical and laboratory stages of orthopedic treatment with solid non-removable bridges.

95. Clinical and laboratory stages of orthopedic treatment with metal-ceramic non-removable bridges.

96. Clinical and laboratory stages of orthopedic treatment with fixed bridges with a combined intermediate part / metal, plastic /.

97. Method of soldering and processing of a bridge prosthesis made of stainless steel, gold fusion. Materials used for processing.

98. Partial absence of teeth (partial secondary adentia). Etiology, pathogenesis, clinic, classification of defects. Features of inspection and laboratory methods of research at partial absence of teeth, substantiation of the diagnosis.

99. Characteristics of partial removable prostheses and their elements. Indications and contraindications to the use of partial removable dentures.

100. Methods of fixation and stabilization of removable dentures. Staple line, types of staples.

101.Staples. Requirements for retaining wire clips.

102.Methods of obtaining prints, characteristics of impression masses. Obtaining plaster models. Determining the boundaries of the prosthetic bed. Sequence and rules of manufacturing wax bases with occlusal rollers.

103.Methods for determining the lower third of the face and fixation of the central occlusion. Groups of teeth of Bethelman antagonists.

104. Checking the design of partial removable plate prostheses. Methodology and sequence, criteria for clinical evaluation.

105. Final modeling of the bases of partial removable plate prostheses on the upper and lower jaws. Plastering of the wax composition of the prosthesis in the cuvette. Stages of replacing wax with plastic. Processing, grinding and polishing of removable plate prostheses.

106. Fitting and imposition of partial removable plate prostheses. Rules for using removable dentures. Phases of

adaptation to prostheses.

107.Correction of partial removable plate prostheses. Clinical and laboratory errors that occur during the manufacture of prostheses.

108. Clinical and laboratory stages of orthopedic treatment of partial tooth loss with removable dentures.

109.Breakage of the base of the removable prosthesis. Reasons. Prevention. Repair methods.

110.Clasp prostheses. Indications for use. Structural elements, their purpose and location in relation to the tissues of the prosthetic bed. Method of obtaining an imprint.

111.Clinical and laboratory stages of orthopedic treatment of partial loss of teeth with clasp dentures with a solid frame, cast on a refractory model.

112.Structural elements of clasp prostheses. Support - holding kdamers, function, location on the teeth, methods of connection with the base.

113.Parallelometry. The essence, methods of conducting. The concept of the path of insertion and removal of the prosthesis. Patterns of choice of staple system

114.construction of staples. Structural elements of the clasp prosthesis that reduce the masticatory pressure on the periodontium of the abutment teeth.

115.Technology of replacement of wax reproduction by metal / casting on refractory models /. Basic technological techniques, basic and auxiliary materials, tools and equipment.

116.Fitting and checking the frame of the clasp prosthesis in the clinic. Criteria for assessing the quality of its manufacture. Designing dentitions. Checking the correctness of the fixation of the central occlusion, the boundaries of the base, the placement of teeth.

117.Method of applying a clasp prosthesis in the partial absence of teeth. Criteria for clinical evaluation of prostheses. Rules for using prostheses.

118. Adaptation to removable dentures.

#### 3.3. Control questions and tasks for independent work

Independent work of students, which is provided by the topic of the lesson along with classroom work, is assessed during the current control of the topic in the relevant lesson.

**10.** Tasks for independent work

**Topic 1.1.** Curation of the patient and filling in medical documentation.

**Topic 3.1.** Anesthesia in the clinic of orthopedic dentistry. Possible complications and methods of their elimination. **Topic 4.1.** Pathology of the hard tissues of the tooth. Etiology, clinic.

**Topic 4.2**. Clinical and laboratory stages of making tabs by direct and indirect methods. Features of formation of

carious cavities of I-V classes according to Black.

**Topic 7.1** Disinfection and sterilization of tools, prints. Prevention of the spread of infectious diseases in the dental clinic.

Topic 13.1. Classification of dentition defects according to Kennedy, taking into account the additions of Apligat.

Topic 13.2. Additional methods (special) examination.

**Topic 15.1.** Types of occlusions, their characteristics and signs. Methods for fixing the mesio-distal position of the mandible in central occlusion.

Topic 16.1. Types of gypsum wax composition in the ditch. Indication.

**Topic 18.1** Basics of working with the articulator.

**Topic 25.1** Modern types of impression materials.

Topic 29.1 Types of porosity of base plastic and their characteristics. Prevention.

**3.4. Individual tasks**(the list approved at the meeting of the department with the determination of the number of points for their performance, which can be added as incentives):

Types of individual research work of students are the preparation of reports and presentations in accordance with the thematic plan of the module, as well as participation in the work of a scientific student group in orthopedic dentistry.

#### **3.5.** Other incentives

**Assessment of individual tasks applicant** (hereinafter - IZZ) contribute to a more in-depth study of the theoretical material by the student, the formation of skills to use knowledge to solve relevant practical problems. IE is performed by the applicant independently with the receipt of the necessary advice from the researcher.

- report of the student's abstract on a practical lesson 0 2 points;
- report with presentation at the practical lesson 0 3 points,
- report at scientific and practical conferences of the department, university, writing abstracts, articles 0 5 points;
- participation in the All-Ukrainian Olympiad 5 10 points

SRIs are evaluated in points (not more than 10), which are added to the points scored for ZND at the end of the study of the discipline, when conducting a "test.

The total amount of points for ZND and IZZ cannot exceed 200 points.

#### 3.6. Rules for appealing the assessment

The appeal of the assessment received by the applicant of higher education is carried out according to

"Regulations on the appeal of the results of the final control of students of KhNMU", approved by the Order of KhNMU from 30.09.2020 No. 252.

#### 4. DISCIPLINE POLICY

In order to successfully complete the relevant course, it is necessary to regularly attend practical classes; to have theoretical preparation for practical classes according to the subject; not to be late and not to miss classes; perform all necessary tasks and work in each lesson; be able to work with a partner or in a group; contact the curators of the course on various issues on the subject of classes and receive it when you need it.

Applicants for educationcan discuss different tasks, but their implementation is strictly individual. It is not allowed to write off, use various software, tips, use a mobile phone, tablet or other electronic gadgets during classes for purposes other than the educational process. Students are not allowed to be late for practical classes.

Applicants for education with special needs can meet with the researcher and warn him before the start of classes, at the request of the student, this can be done by the head of the group. If you have any questions, please contact the researcher.

The participation of students in conducting research and conferences on this topic is encouraged.

All students of KhNMU are protected by the Regulations on Prevention, Prevention and Settlement of Cases Related to Sexual Harassment and Discrimination at Kharkiv National Medical University, designed to define an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. This Regulation is developed on the basis of the following normative legal acts of Ukraine: the Constitution of Ukraine; Law of Ukraine "On Education"; Law of Ukraine "On Higher Education"; Law of Ukraine "On Principles of Preventing and Combating Discrimination in Ukraine"; Law of Ukraine "On Ensuring Equal Rights and Opportunities for Women and Men"; Convention for the Protection of Human Rights and Fundamental Freedoms; Convention for the Suppression of Discrimination in Education; Convention on the Elimination of All Forms of Discrimination against Women; General Recommendation No 25 to paragraph 1 of Article 4 of the Convention on the Elimination of All Forms of Discrimination against Women; General Comment № 16 (2005) "Equal rights for men and women to enjoy economic, social and cultural rights" (Article 3 of the International Covenant on Economic, Social and Cultural Rights; UN Economic, Social and Cultural Rights Committee); Recommendations on education in the spirit of international mutual understanding, cooperation and peace and education in the spirit of respect for human rights and fundamental freedoms (UNESCO), the Concept of the State Social Program for Equal Rights and Opportunities for Women and Men until 2021. Kharkiv National Medical University provides education and work that is free from discrimination, sexual harassment, intimidation or exploitation. The University recognizes the importance of confidentiality. All persons responsible for the implementation of this policy (staff of deans' offices, faculties, institutes and the Center for Gender Education, members of the student government and ethics committee, vice-rector for research and teaching) are confidential about those who report or accuse of discrimination. or sexual harassment (except where the law requires disclosure and / or when disclosure by the University is necessary to protect the safety of others).

KhNMU creates a space of equal opportunities, free from discrimination of any national, racial or ethnic origin, sex, age, disability, religion, sexual orientation, gender, or marital status. All rights, privileges, programs and activities granted to students or employees of the University apply to all without exception, provided they are

properly qualified. The anti-discrimination policy and the policy of counteracting sexual harassment of KhNMU are confirmed by the Code of Corporate Ethics and the Charter of KhNMU.

#### Behavior in the audience

It is important for students to follow the rules of good behavior at the university. These rules are common to all, they also apply to all faculty and staff, and are not fundamentally different from the generally accepted norms.

During classes

- allowed:
- to leave the audience for a short time if necessary and with the permission of the researcher;
- drink soft drinks;
- take photos of presentation slides;
- take an active part in the lesson).
  - forbidden:
- eat (except for persons whose special medical condition requires another in this case, medical confirmation is required);
- smoking, drinking alcohol and even low-alcohol beverages or drugs;
- to use obscene language or use words that offend the honor and dignity of colleagues and faculty;
- gaff;
- to damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);
- shouting, shouting or listening to loud music in classrooms and even in corridors during classes.

#### **5. ACADEMIC INTEGRITY**

The Department of Orthopedic Dentistry maintains zero tolerance for plagiarism. Applicants are expected to constantly raise their awareness of academic writing. The first classes will provide information on what to consider plagiarism and how to properly conduct research and scientific research.

#### **Occupational Health**

The first lesson of the course will explain the basic principles of labor protection by conducting appropriate training. It is expected that every higher education seeker should know where the evacuation exit closest to the audience is, where the fire extinguisher is, how to use it, and so on.

#### 6. RECOMMENDED LITERATURE

#### **Basic:**

- Gasyuk PA, Kostenko EY, Machogan VR, Rosolovskaya SO, Vorobets AB, Radchuk VB Stud Book of Orthopedic Dentistry. Ternopil-Uzhhorod. 2018. - 369 p.
- 2. Rozhko MM, Nespryadko VP, Mikhailenko TN etc. Dental prosthetic equipment. К .: Книга-плюс, 2018. 604 с.
- 3. Dentistry. Textbook. In 2 books. Book. 1 / MM Rozhko, ZB Popovich, VD Kuroyedova and others; for order. Prof. М.М.Рожка. К .: BCB «Медицина», 2020. 872 с.
- 4. Gasyuk PA Almanac of orthopedic dentistry // PA Gasyuk, E. Ya. Kostenko, VR Machogan, SO Rosolovskaya, AB Vorobets // Ternopil: Bogdan 2018. 352p.
- 5. Gasyuk PA Technological aspects of manufacturing orthopedic structures // PA Gasyuk, DM Korol, SO Rosolovskaya, LS Korobeynikov, VB Radchuk, RV Kozak // Ternopil : ФОП Пархін Р. А. 2017. 140c.
- King D.M. Fundamentals of clasp prosthetics / DM Korol, DD Kindiy, LS Korobeynikov, OD Odzhubeyskaya, RV Kozak, TP Malyuchenko // Poltava. - 20119 - 139p.
- 7. Korol MD Dental materials science / MD Korol, OD Odzhubeyskaya, DM Korol, IM Tkachenko, VM Petrushanko, MO Ramus, AD Dorubets, DD Kindiy, LS Korobeynikov // Poltava: FOP Myron IA 2018. 176p.

8. Fastovets OO Neznimne zubne protezuvannia: navchalno-metodychnyi posibnyk / OO Fastovets, RA Kotelevsky, SS Kobylyak // Dnipro: DMA. - 2017. - 212p.

#### Additional literature

 Gasyuk AP Human odontology / AP Gasyuk, PA Gasyuk, TV Novoseltseva // Saarbrucken: LAMBERT Academic Publishing. - 2017. - 181p.

#### 7. INFORMATION RESOURCES.

## **Methodical instructions:**

- 1. Order of patient orthopedic treatment stages. Golik VP, Yanishen IV, Grishanin GG, Tomilin VG, Diudina IL 2017
- 2. http://repo.knmu.edu.ua/handle/123456789/15536
- Replacement of partial defects of the dentition with bridges. Indications and contraindications. Yanishen IV, Pogorila AV, Pereshivailova IO, Shepenko AG - 2017

http://repo.knmu.edu.ua/handle/123456789/22228

- 4. Modern methods of examination of dental patients. Preparation of the oral cavity before orthopedic intervention. Drawing up a treatment plan for a dental patient. Yanishen IV, Pereshivailova IO, Pogorila AV, Yarina IM - 2018 <u>http://repo.knmu.edu.ua/handle/123456789/22247</u>
- Aesthetic crowns: plastic, composite, metal-ceramic, metal-free. Indications and contraindications. Yanishen IV, Pereshivailova IO, Pogorila AV, Yarina IM - 2018 <u>http://repo.knmu.edu.ua/handle/123456789/22274</u>

## Lectures:

1. Examination of patients in the clinic of orthopedic dentistry. Krichka NV -2019;

http://repo.knmu.edu.ua/handle/123456789/7011

2. Orthopedic treatment (restoration) of DENTition defects (partial adentia) by dental fixed bridges. Tomilin, VG- 2020.

http://repo.knmu.edu.ua/handle/123456789/12149

3. Maxillofacial orthopedics. Goals and objectives. Classification of jaw fractures. Clinical, diagnostic, orthopedic treatment. Tomilin, VG -2019.

http://repo.knmu.edu.ua/handle/123456789/12147

4. Orthopedic methods of treatment in the complex treatment of periodontal diseases. Maslovsky AS -2019 http://repo.knmu.edu.ua/handle/123456789/12139

5. Adaptation to removable prosthesis in orthopedic treatment of dentition partial defects. Mistakes and complications in orthopedic treatment by removable dentures. Tomilin, VG -2020. http://repo.knmu.edu.ua/handle/123456789/12144

## 8. OTHER

## Active links:

- 1. <u>http://www.nmu.edu.ua/kaf59.php</u>
- 2. http://eduport.nmu.edu.ua/
- 3. <u>http://goo.gl/enEezy</u>.