Ministry of Health of Ukraine
Poltava State Medical University
Department Propaedeutic of Orthopedic Dentistry

SYLLABUS

ORTHOPEDIC DENTISTRY
(name of academic discipline)
Compulsory discipline
(normative / selective discipline)

regulatory discipline OK 27

level of higher education	the second (master's) level of higher education
field of knowledge	22 "Health care"
specialty	221 "Dentistry"
educational qualification	Master of Dentistry
professional qualification	Dentist
educational and professional program	"Dentistry"
form of education	daily

course (s) and semester (s) of study discipline Third year V-VI semesters

Module 1. Prosthetics with fixed dentures
Module 2. Prosthetics with partial removable prostheses (SPA)

INFORMATION ABOUT TEACHERS WHO TEACH THE COURSE

Last name, first name, patronymic of the teacher, scientific degree, academic title	Ruslan Kozak, Candidate of Medical Sciences, Docent Kateryna Toncheva, Ph.D., Assistant Professor
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MAIN CHARACTERISTICS OF THE COURSE

The scope of the discipline "Orthopedic Dentistry »
Module 1. Prosthetics with fixed structures of dentures
Module 2. Prosthetics with partial removable prostheses (SPA)
Number of credits / hours - 5.5 / 165 hours, of which:
Lectures (hours) - 16 hours
Practical classes (hours) - 100 hours
Independent work (hours) - 49 hours.
Type of control - SPA (exam)

Course policy

When organizing the educational process in PSMU, teachers and applicants for higher education act in accordance with the Regulations on the organization of the educational process in the Poltava State Medical University (https://www.pdmu.edu.ua/storage/department-npr/docs_links/0nrGNrEzksWWytpXV8j05INcg9wbyVjkYx9FrbEY.pdf).

Regulations on the academic integrity of higher education seekers and employees of the Poltava State Medical University (https://www.pdmu.edu.ua/storage/n_process_vimo/docs_links/88o0ZHjaf3yP9IvQe51EoRkqhgN3UWIob7oh41np.pdf).

Observance of academic integrity by applicants for higher education at the Department Propaedeutic of Orthopedic Dentistry involves independent performance of educational tasks, current and final control of learning outcomes, personal attendance at all lectures and practical classes.

Adherence to academic integrity by scientific and pedagogical staff of the Department Propaedeutic of Orthopedic Dentistry involves the provision of quality educational services, objective evaluation of learning outcomes, control over the observance of academic integrity by applicants for higher education.

(https://www.pdmu.edu.ua/storage/department-npr/docs_links/OaN2nwysLPFAUDRvuDPvFSpzM1j9E9CwQQkgr93b.pdf).

Applicants for higher education who are trained in the discipline "Orthopedic Dentistry" Module 1. Prosthetics with fixed dentures and Module 2. Prosthetics with partial removable dentures (SPA) must comply with the rights and responsibilities of applicants for higher education of the academy: comply with the laws of Ukraine , The Charter of the University, respect the dignity, rights, freedoms and legitimate interests of all participants in the educational process and adhere to ethical standards; comply with safety requirements, fire safety; comply with the requirements of the curriculum within the timeframe determined by the schedule of the educational process and the individual curriculum; come to classes on time, according to the schedule; work out all the missed classes. During their stay at the Department Propaedeutic of Orthopedic Dentistry, higher education students must comply with the requirements for appearance (dress code). It is forbidden to violate the schedule of the educational process, to be late for classes, to use a mobile phone during classes, to smoke on the territory of the clinical base of the department, to commit immoral actions that degrade human dignity, to use profanity.

Regulations on the organization of independent work of students at the Poltava State Medical University (https://www.pdmu.edu.ua/storage/department-npr/docs_links/9fsgUnv0JUzOhYB7CkJF2dX8jSDmM3vlt4LUMebt.pdf)

Independent work of higher education students at the Department of Propaedeutics of Orthopedic Dentistry is provided by a system of educational and methodological documentation provided by the working curriculum of the discipline: textbooks, lecture notes, guidelines for organizing independent work, electronic resources and more. Control over the assimilation of educational material in the discipline of orthopedic dentistry, attributed to self-study - is mandatory. The form of control is determined by the working program of the discipline in the form of an abstract, written in his own hand in compliance with the principles of academic integrity and designed in accordance with the requirements developed by the department.

Regulations on the completion of missed classes and unsatisfactory grades by applicants for higher education of the Poltava State Medical University

(https://www.pdmu.edu.ua/storage/department-npr/docs_links/d2v3WhcBOWnuedYRoBKRe7k1xnl4KtbB2r2NR2CG.pdf).

Classes in which the applicant for higher education was not personally present are considered to be missed. These classes are subject to compulsory practice. Unsatisfactory grades by applicants for higher education take place at the department, which is recorded in the "Journal of unsatisfactory grades."

Description of the discipline (abstract)

Orthopedic dentistry is a discipline that allows higher education students to master in the clinic certain dental manipulations used in the treatment of patients with defects of the crown of the tooth and partial defects of the dentition. Acquired in this way special (professional) competencies of higher education in the future are used in the treatment of dental patients of orthopedic profile. Applicants for higher education get acquainted with the organization and work of clinical offices, documentation.

Prerequisites and postrequisites of the discipline (interdisciplinary links)

Prerequisites:

a) the discipline is based on the preliminary study of higher education by human anatomy, histology, embryology and cytology, medical biology, medical chemistry, biological and bioorganic chemistry, medical physics, microbiology, virology and immunology and is integrated with these disciplines;

c) the discipline is based on the study of higher education propaedeutic disciplines of dental profile: propaedeutic of orthopedic dentistry, propaedeutic of therapeutic dentistry, propaedeutic of surgical dentistry and propaedeutic of pediatric therapeutic dentistry and is integrated with these disciplines.

Postrequisites:

a) the discipline lays the foundations for the study of higher education by such clinical disciplines as orthopedic dentistry, therapeutic dentistry, orthodontics, surgical dentistry;

b) the discipline is integrated with the following clinical disciplines: prevention of dental diseases, pediatric therapeutic dentistry and therapeutic dentistry, surgical dentistry.

The purpose and objectives of the discipline:

- the purpose of studying the discipline is:

- mastering in patients the method of performing certain dental manipulations used in the treatment of patients with defects of the crown of the tooth and partial adentia for the possibility of their further use in the treatment of patients and formation of special (professional) competencies in the clinic of orthopedic dentistry.

– The main tasks of studying the discipline are:

- examination of patients in the clinic of orthopedic dentistry;
- functional anatomy and clinical biomechanics of the dental apparatus;
- anesthesia in the clinic of orthopedic dentistry, emergencies;
- clinical and laboratory stages of making artificial crowns;
- clinical and laboratory stages of manufacturing bridge-like prostheses;
- examination of patients with partial tooth loss, general characteristics and design planning of partial removable dentures;
- clinical and laboratory stages of manufacturing partial removable plate prostheses;

- clinical and laboratory stages of manufacturing clasp prostheses and prostheses with cast metal base;
- adaptation to removable prostheses and the effect of prostheses on oral tissues.

Competences and learning outcomes in accordance with the educational and professional program, the formation of which is facilitated by the discipline (integral, general, special), including study Module 1. Prosthetics with fixed dentures, Module 2. Prosthetics with partial removable dentures (SPA)

- *integral:*

- ability to solve problems and problems in the field of health care in the specialty "Dentistry" in professional activities or in the learning process, which involves research and / or innovation and is characterized by uncertainty of conditions and requirements.

- *general:*

1. Ability to abstract thinking, analysis and synthesis.
2. Knowledge and understanding of the subject area and understanding of professional activity.
3. Ability to apply knowledge in practice.
4. Ability to communicate in the state language both orally and in writing.
5. Ability to communicate in English. Ability to use international Greco-Latin terms, abbreviations and clichés in professional oral and written speech.
6. Skills in the use of information and communication technologies.
7. Ability to search, process and analyze information from various sources.
8. Ability to adapt and act in a new situation.
9. Ability to identify, pose and solve problems.
10. The ability to be critical and self-critical.
11. Ability to work in a team.
12. The ability to act socially responsibly and consciously.
13. The ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.

- *special:*

1. Ability to collect medical information about the patient and analyze clinical data.
2. Ability to interpret the result of laboratory and instrumental research.
3. Ability to diagnose: determine the previous, clinical, final, concomitant diagnosis, urgent conditions.
4. Ability to plan and implement measures for the prevention of diseases of organs and tissues of the oral cavity and maxillofacial region.
5. Ability to design the process of providing medical care: to determine approaches, plan, types and principles of treatment of diseases of organs and tissues of the oral cavity and maxillofacial region.

6. Ability to determine the rational mode of work, rest, diet in patients in the treatment of diseases of organs and tissues of the oral cavity and maxillofacial region.
7. 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.
8. Ability to perform medical and dental manipulations.
9. Ability to treat major diseases of organs and tissues of the oral cavity and maxillofacial region.
10. Ability to organize and conduct a screening examination in dentistry.
11. Ability to assess the impact of the environment on the condition population health (individual, family, population).
12. Ability to maintain regulatory medical records.
13. Processing of state, social and medical information.
14. Ability to organize and conduct rehabilitation activities and care in patients with diseases of the oral cavity and WHAT.
15. Ability to legally support their own professional activities.

Program learning outcomes, the formation of which is facilitated by the discipline "Orthopedic Dentistry", including study Module 1. Prosthetics with fixed dentures, Module 2. Prosthetics with partial removable dentures (SPA)

1. Demonstrate mastery of moral and deontological principles of a medical specialist and the principles of professional subordination in the clinic of orthopedic dentistry.

2. Demonstrate the ability to examine patients with defects of hard tissues of teeth and partial defects of the dentition in the clinic of orthopedic dentistry.

3. Demonstrate the performance of dental manipulations in patients with defects of the hard tissues of the teeth and partial defects of the dentition in the clinic of orthopedic dentistry.

Learning outcomes for the discipline:

know:

Module 1. Prosthetics with fixed dentures.

1. Examination of patients in the clinic of orthopedic dentistry - stages, basic and additional methods of examination, medical documentation.
2. Pathological conditions and general somatic. diseases that are risk factors for dental treatment.
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 and pre-prosthetic preparation.
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 endurance 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 masticatory pressure redistribution, buttresses.
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. Bonville's three-point contact.
26. Lateral occlusion, contact options (occlusal concepts).
27. Supracontacts. Etiology, classification.
28. Apparatus that reproduce the movements of the lower jaw. Classifications, areas of application.
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 by means of a 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 of prevention.
46. Local complications of injectable anesthesia. Causes, ways of prevention.
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. Emergencies 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 that are 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 of prevention.
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. Laboratory stages of manufacture.
67. Solid combined crowns. Laboratory stages of manufacture.
68. Provisional crowns. Indications, purpose of use, types. Materials for making makeshift crowns.
69. Methods of direct manufacture of temporary structures.
70. Laboratory method of making makeshift 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 soldering of parts of stamped and soldered structures. Solders - types, composition, properties, requirements. Fluxes. Solderless method of connecting parts of bridges.
77. Gypsum. Composition, properties, application.
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 making solid crowns.
96. Errors in the laboratory stages of manufacturing solid bridges.
97. Errors in the laboratory stage of manufacturing plastic crowns.
98. Errors in examining patients and planning orthopedic treatment.
99. Errors when checking the construction and cementing of fixed orthopedic structures.

Module 2. Prosthetics with partial removable prostheses.

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 prostheses (PRP). Requirements for abutment teeth.
5. Constructions of PRP, their constituent parts. Features of masticatory pressure transformation by different types of PRP.
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. PRP fixation planning. Clasp lines. Factors influencing the choice of fixing elements in removable dentures.
12. Obtaining working prints for the manufacture of PRP - materials and techniques. Indications for fingerprints with individual spoons.
13. The concept of fixation, stabilization, balance of removable prostheses 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, designs, indications.
18. Boundaries of the bases of partial removable plate prostheses on the upper and lower jaws.
19. Options for the location of the arches of clasp prostheses on the upper and lower jaws. Arc parameters.
20. Groups of dentition defects according to Betelman, clinical characteristics.
21. The method of determining and fixing the central ratio of the jaws in the second group of defects according to Betelman.
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 PRP; 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 PRP, 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. Ney staple system, 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 alloy 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 clip, 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 PRP.
53. Errors at the stage of casting prosthesis frames.
54. Errors in the imposition and correction of prostheses.

be able:

Module 1. Prosthetics with 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. Analysis of occlusion 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 artificial crowns.

Module 2. Prosthetics with partial removable prostheses.

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 of the 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

Thematic plan of lectures (by modules) with the indication of the basic questions considered at lectures

№ s / n	Name topics	Number hours
Module 1. Prosthetics with fixed dentures.		
1	Examination of patients in the clinic of orthopedic dentistry. Diagnosis. • Methodology and principles of diagnostic research in the clinic of orthopedic dentistry. • Sequence and characteristics of the stages of clinical examination of patients. • Substantiation of expediency of use of additional (special) research methods. • Principles of diagnosis.	2

2	Indications and clinical and technological stages of manufacturing artificial crowns. • Classification of artificial crowns. • General indications and contraindications to the manufacture of artificial crowns. • Features of the use of drugs to reduce the sensitivity of prepared teeth. • Features of clinical and laboratory stages of manufacturing various artificial crowns. • Positive and negative properties of artificial crowns.	2
3	Indications and clinical and technological stages of manufacturing bridge prostheses. • Definition of "Bridge prosthesis". • Classification of bridges. • Indications and contraindications to the manufacture of bridges. • Clinical and technological stages of manufacturing stamped and soldered bridges. • Clinical and technological stages of manufacturing bridge-like prostheses by different methods: according to Z.Ya. Shurom, M.I. Ligun, VI Kulazhenko, unprepared method of manufacturing bridge-like prostheses; • Basic and auxiliary materials for the manufacture of bridges.	2
4	Modern methods of prosthetics with fixed orthopedic structures. • Development of modern materials in orthopedic dentistry. • Modern technologies for making dentures. • Advantages and disadvantages of various denture designs.	2
Module 2. Prosthetics with partial removable prostheses		
1	Prosthetics of dentition defects with partial removable plate dentures. • History of introduction of partial removable orthopedic structures in the practice of an orthopedic dentist. • Planning of a partial removable orthopedic structure taking into account anatomical and topographic features of jaws and morpho-functional changes at partial loss of teeth. • Planning a partial plate structure. • Types of fixation of CNC prostheses. • Auxiliary and basic materials for the manufacture of CZP prosthesis and clasp prosthesis.	2
2	Clasp prostheses: planning the design of clasp prostheses.	2

	Parallelometry. • History of introduction of partial removable orthopedic structures in the practice of an orthopedic dentist. • Planning of a partial removable orthopedic structure taking into account anatomical and topographic features of jaws and morpho-functional changes at partial loss of teeth. • Planning of a clasp design. Parallelometry. • Auxiliary and basic materials for the manufacture of CZP prosthesis and clasp prosthesis. • Clinical and laboratory stages of manufacturing plate and clasp construction.	
3	Prosthetics of dentition defects with clasp dentures. • History of introduction of partial removable orthopedic structures in the practice of an orthopedic dentist. • Clinical and laboratory stages of manufacturing plate and clasp construction. • Planning of a clasp design. Parallelometry. • Auxiliary and basic materials for the manufacture of CZP prosthesis and clasp prosthesis. • Indications for the use of clasp prostheses.	2
4	Influence of bases of removable prostheses on tissues of the oral cavity. Prosthetic stomatitis. Adaptation to removable dentures. • Definition of the concept of "Adaptation" and methods of adaptation by V.Yu. Courland, IS Rubinov, GB Shilova. • Classifications of prosthetic stomatitis. • Clinical picture of allergic and toxic effects of removable dentures. • Methods of eliminating the negative impact of removable dentures on the tissues of the prosthetic bed and the patient's body.	2
	Together	16

Thematic plan of practical classes by modules and content modules with indication of the main issues considered in the practical lesson

№ s / n	Name topics	Number hours
Module 1. Prosthetics with fixed dentures.		
1	Clinical methods of examination. • Tactics of conducting an interview with a patient. • The sequence of stages of clinical examination.	2
2	Additional (special) examination methods. • Characteristics of additional survey methods. •The feasibility of using additional survey methods.	2

3	Diagnosis. History of the disease, the rules of its management. • Rationale and formulation of the diagnosis. • Methods of registration of medical history.	2
4	Orthopedic treatment plan. Preparation of the oral cavity for prosthetics with fixed prostheses. • Sections of the orthopedic treatment plan. • General health and special training methods.	2
5	***** Control of assimilation of the content module 1.	2
6	Components of the chewing apparatus, their characteristics. • Anatomical and functional features of the components of the masticatory apparatus.	2
7	Biomechanics of the masticatory apparatus: vertical, sagittal, transverse movements of the mandible. Phases of masticatory movements according to Giza. • Biomechanical bases of masticatory movements of the mandible.	2
8	Articulation. Occlusion. Signs of central, anterior and lateral occlusion. • Definition of articulation and occlusion. • Muscular, joint and dental signs of different types of occlusion.	2
9	Apparatus that reproduce the movements of the lower jaw: their scope. Obtaining diagnostic models. • Classification of articulators. • Substantiation and methods of obtaining diagnostic models	2
10	***** Control of assimilation of the content module 2.	2
11	Anesthesia in orthopedic dentistry. Means and indications for the use of various types of analgesia. • Types of anesthesia in orthopedic dentistry. • Rationale for the use of different types of analgesia.	2
12	Errors and complications during anesthesia. Emergencies at the dental office. • Causes of complications during anesthesia. • Classification of emergencies.	2
thirteen	***** Control of assimilation of the content module 3.	2
14	Indications and clinical and laboratory stages of making tabs. • Methods of making tabs. • Materials and technology of making tabs.	2
15	Indications and clinical and laboratory stages of making a stamped crown. • Classification of artificial crowns. • Basic and auxiliary materials.	2

	• Technology of making a stamped crown.	
16	Indications and clinical and laboratory stages of manufacturing combined, plastic temporary crowns. • Rationale for the use of combined, plastic makeshift crowns. • Materials and manufacturing technologies.	2
17	Indications and clinical and laboratory stages of making pin teeth. • Requirements for the root in the manufacture of a pin tooth. • Making a pin tooth according to Ilyina-Markosyan.	2
18	Indications and clinical and laboratory stages of manufacturing solid and combined crowns. • Basic and auxiliary materials for the manufacture of solid and combined crowns. • The sequence of clinical and laboratory stages of manufacturing solid and combined crowns.	2
19	***** Control of assimilation of the content module 4.	2
20	Indications and clinical and laboratory stages of production of stamped-soldered bridges. • Biomechanics of a bridge prosthesis. • The sequence of clinical and laboratory stages of manufacturing stamped and soldered bridges.	2
21	Indications and clinical and laboratory stages of manufacturing solid and combined bridges. • Rationale for the use of solid and combined bridges. • Features of production of solid and combined bridge prostheses.	2
22	Indications and clinical and laboratory stages of manufacturing non-removable metal-free structures: veneers, crowns, bridges. • Materials and modern methods of manufacturing metal-free structures.	2
23	Complications and errors in prosthetics with fixed prostheses. • Errors are possible at the stages of prosthetics with fixed prostheses. • Causes of complications and their prevention.	2
24	* Control of assimilation of the content module 5.	2
25	Final control of mastering module 1.	2
	Together	50
Module 2. Prosthetics with partial removable prostheses		
1	Morpho-functional changes of the dental apparatus with partial loss of teeth. • Definition of "partial tooth loss". • The nature of morpho-functional disorders of the masticatory apparatus with partial loss of teeth.	2

2	Methods of examination of patients with partial defects of the dentition. • Clinical and special methods. • The sequence of stages of the survey.	2
3	Classifications of the dental system in case of partial tooth loss. Principles of construction and formulation of the diagnosis. • Morphological classifications of partial tooth loss. • Classifications of a functional condition at partial loss of teeth. • Sections of the diagnosis.	2
4	Orthopedic treatment plan for patients with dentition defects, which involves the use of removable dentures. Methods of preparation of the oral cavity for prosthetics with partial removable prostheses. • Choice of construction and materials. • General health preparation of organs and tissues of the oral cavity for prosthetics. • Special methods of preparation.	2
5	***** Control of assimilation of the content module 6.	2
6	Indications for use and choice of design of a partial removable plate prosthesis. Materials for the manufacture of partial removable plate prostheses. • The choice of the design of a partial removable plate prosthesis depending on the diagnosis. • Basic and auxiliary materials.	2
7	Obtaining impressions and models for the manufacture of partial removable plate prostheses. Determining the boundaries of partial removable plate dentures with different topography of dentition defects. • Materials and techniques for obtaining prints and models. • Substantiation of the boundaries of the CNC of prostheses depending on the topography of defects	2
8	Determination and fixation of central occlusion in I, II and III groups of complexity of dentition defects by A..I. Betelman. • Groups of complexity of dentition defects according to AI Betelman. • Features of definition of CO at various groups.	2
9	Fixation and stabilization of partial removable plate prostheses, factors and methods that provide them. Clamps: classifications, designs, manufacturing methods. • Definition of "fixation and stabilization". • Methods and elements of fixation.	2
10	Selection and placement of teeth in partial removable plate	2

	dentures. Clinical stage of testing the design of a partial removable plate prosthesis. Technology of replacement of wax composition of partial removable plate prosthesis with plastic. Processing, grinding and polishing of the prosthesis. • Methods of teeth placement. • Methods of plastering in a ditch.	
11	Correction and imposition of a partial removable plate prosthesis. Terms of use and care. Phases of adaptation to partial removable plate prostheses. Functional efficiency and terms of use of partial removable plate prostheses. • Methods of correction of the prosthesis. • Patient advice on using a prosthesis.	2
12	Errors in the stages of manufacture and complications when using partial removable plate prostheses. Influence of partial removable plate prostheses on the mucous membrane. • Errors in the manufacture of PRP prosthesis and their complications during use. • The reaction of the mucous membrane to the materials of the PRP prosthesis.	2
Thirteen	Causes of failures and methods of repair of partial removable plate prostheses. Relocation methods. • Mistakes of the doctor and the dental technician at manufacturing of PRP of a prosthesis. • Laboratory and non-laboratory methods of repair.	2
14	***** Control of assimilation of the content module 7.	2
15	Clasp prostheses: fundamental differences from partial removable plate prostheses, indications and contraindications to manufacture. Selection of abutment teeth: requirements, training. • Features of clasp prostheses.	2
16	Planning the design of a clasp prosthesis depending on clinical conditions. Parallelometry, its types. Biomechanics of clasp construction. • Design features of clasp prostheses. • Methods of parallelometry.	2
17	Fixation and stabilization of clasp prostheses, factors that provide them. Clasp prosthesis clasps: classification, factors determining the choice of clasp type. • Features of fixing clasp prostheses. • Factors that ensure the stabilization of the clasp prosthesis.	2
18	Duplication of models. Preparing for duplication. Duplicate masses and molding materials. Modeling of the clasp prosthesis frame. • Methods and materials for model duplication. • Methods and materials for modeling the frame of a clasp prosthesis.	2

19	Metal alloys for the manufacture of the frame of the clasp prosthesis. Casting technology. Methods of compensation of shrinkage of alloys. • Composition, properties and application of metal alloys for the manufacture of clasp prosthesis frame.	2
20	Fitting and fitting the frame of the clasp prosthesis in the oral cavity. Signs of quality workmanship and possible errors. • The sequence of stages of delivery of the clasp prosthesis.	2
21	Imposition of a clasp prosthesis. Early control. Adaptation to a clasp prosthesis. Terms of use of clasp prostheses. Complications at the stages of use. • Forecast of clasp prosthesis use.	2
22	Errors at the stages of manufacture and complications when using clasp prostheses. • Errors are possible at the stages of prosthetics with clasp prostheses. • Causes of complications and their prevention.	2
23	Modern materials and technologies for the production of partial removable dentures. Improving the manufacture of partial removable dentures.	2
24	***** Control of assimilation of the content module 8.	2
25	* Computer test control of knowledge.	2
	Total	50

Note: * topics on which there must be a positive assessment.

Independent work

№ s/n	Topic	Number hours
1.	Preparation for practical and remote classes - theoretical preparation and development of practical skills	20
2.	Preparation for laboratory work	
3.	Writing an educational medical history	
4.	Preparation of the control work, essay, preparation for current control activities	16
5.	Preparation for the final modular control	4
6.	Preparation for the exam	6
7.	Processing of topics that are not included in the classroom lesson plan (list):	
Module 1. Prosthetics with fixed dentures.		
1	Elaboration of topics that are not included in the lesson plan:	
	1. Diagnostic wax modeling when planning orthopedic	1

	treatment using fixed structures. • Materials and tools used for diagnostic modeling. • Features of diagnostic modeling for lateral and frontal groups of teeth.	
	2. Reinforcement of endodontically treated teeth with standard pins. • Classification of standard pins. • Methods of reinforcement of endodontically treated teeth.	0,5
Module 2. Prosthetics with partial removable prostheses.		
1	Elaboration of topics that are not included in the lesson plan:	
	1. Obtaining functional impressions with partial removable prosthetics. Technologies for making hard individual spoons. • Method of obtaining functional impressions. • Materials and equipment for the manufacture of rigid individual spoons.	1
	2. Modern materials for the manufacture of prosthetic bases. • Classification of modern materials for the manufacture of prosthetic bases. • Technology of using materials for the manufacture of prosthetic bases.	0,5
8.	Total	49

Individual tasks

Module 1. Prosthetics with fixed dentures.

1. Abstracts:
   - Criteria for assessing the existing orthopedic structures in the examination of patients. 10 pages. Manuscript.
   - Classifications of articulators. Choice of articulator for studying diagnostic models. 10 pages. Manuscript.
   - Psychogenic reactions to local anesthetics: clinical manifestations, emergency care, prevention. 10 pages. Manuscript.
   - Comparative characteristics of artificial crowns. 10 pages. Manuscript.
   - Periodontal aspects of tooth preparation. 10 pages. Manuscript.
   - Biomechanics of a bridge prosthesis. 10 pages. Manuscript.
   - Characteristics of groups of fixing cements for fixed structures. 10 pages. Manuscript.
2. Participation in the dental quest of the department, student scientific conferences and the Olympiad.

Scientific works:

1. Comparative clinical evaluation of the effectiveness of treatment of hyperesthesia of prepared vital teeth with desensitizers. 6 pages. Remote conference "The future of orthopedic dentistry is 2020".

Module 2. Prosthetics with partial removable prostheses.
1. Abstracts:

- Technological features of manufacturing partial removable plate prostheses with cast base. 10 pages. Manuscript.
- Mechanism and clinical manifestations of allergic action of the base of partial removable plate prostheses. 10 pages. Manuscript.
- Functional efficiency of partial removable plate prostheses. 10 pages. Manuscript.
- Modern metal alloys for the manufacture of clasp prostheses. 10 pages. Manuscript.
- Criteria for evaluating the structural elements of clasp prostheses. 10 pages. Manuscript.
- Advantages of clasp prostheses over partial removable plate prostheses. 10 pages. Manuscript.

2. Participation in the dental guest of the department, student scientific conferences and the Olympiad.

The list of theoretical questions for preparation of applicants of higher education for final modular control and semester final attestation

The list of theoretical questions for preparation of applicants of higher education for the final modular control

Module 1. Prosthetics with fixed dentures.

1. Components of the chewing apparatus, their characteristics.
2. Vertical movements of the lower jaw.
3. Assessment of the condition of the teeth during the examination of the patient.
4. Five of Hanau.
5. Examination and examination of the patient's face.
6. Bonville's laws.
7. Assessment of the condition of the dentition during the examination of the patient.
8. Phases of the Giza chewing cycle.
9. Assessment of the condition of the oral mucosa during the examination of the patient.
10. Anatomical and functional features of the dental system with partial tooth loss.
11. Means and indications for the use of various types of analgesia.
12. Methods of preparing the oral cavity for prosthetics.
13. Errors and complications during anesthesia.
14. Transverse movements of the lower jaw.
15. Orthopedic treatment plan.
16. Classification of tooth cavities according to Black.
17. History of the disease (outpatient card) of a dental orthopedic patient: rules of registration.
18. Sagittal movements of the lower jaw.
19. Static method for determining masticatory efficiency according to Agapov.

20. Classification of dentition defects by the number of missing teeth in defects.
21. Functional methods for determining masticatory efficiency.
22. Classification of dentition defects according to Kennedy.
23. Apparatus that reproduce the movements of the lower jaw.
24. Aplegate Rules (1954) for the application of the Kennedy classification.
25. Mastication.
26. Dental arches.
27. Electromyography.
28. The state of physiological rest of the lower jaw.
29. Gnatodynamometry.
30. Indications and clinical and laboratory stages of making tabs.
31. Occlusion: types of occlusion.
32. Galvanometry.
33. Physiological types of occlusion.
34. Radiography.
35. Indications and clinical and laboratory stages of manufacturing a stamped metal crown.
36. Pathological types of occlusion.
37. Indications and clinical and laboratory stages of manufacturing a combined crown.
38. Buttresses of the upper jaw.
39. Casting of dentures.
40. Indications and clinical and laboratory stages of making a plastic crown.
41. Trajectories of the lower jaw.
42. Computed tomography.
43. Indications and clinical and laboratory stages of making pin teeth.
44. Types of prosthetics (immediate, nearest, remote).
45. Indications and clinical and laboratory stages of making a solid crown.
46. Indications and clinical and laboratory stages of manufacturing a metal-plastic crown.
47. Indications and clinical and laboratory stages of manufacturing a metal-ceramic crown.
48. Facial muscles of the maxillofacial area.
49. Psychological preparation of the patient before prosthetics.
50. Indications and clinical and laboratory stages of manufacturing a stamped-brazed bridge.
51. Chewing muscles of the maxillofacial area.
52. General rehabilitation measures before prosthetics.
53. Indications and clinical and laboratory stages of manufacturing a solid bridge.
54. Temporomandibular joint.
55. Special therapeutic preparation of the oral cavity before prosthetics.
56. Indications and clinical and laboratory stages of manufacturing a metal-plastic bridge prosthesis.
57. Diagnosis. Rationale and formulation of the diagnosis.
58. Special surgical preparation of the oral cavity before prosthetics.

59. Indications and clinical and laboratory stages of manufacturing a metal-ceramic bridge prosthesis.
60. Signs of central occlusion.
61. Special orthopedic and orthodontic preparation of the oral cavity before prosthetics.
62. The Popov-Godon phenomenon.
63. Static method for determining masticatory efficiency according to Oxman.
64. Dissection-free method of manufacturing bridges.
65. Compensation curves in orthognathic occlusion.

List of practical skills for the final module control

Module 1. Prosthetics with fixed dentures.

1. Find out the reasons for the patient's visit to the orthopedic dentistry clinic (complaints, medical history, life history).
2. Examine and examine the face.
3. Examine the condition of the teeth.
4. Examine the condition of the dentition.
5. Assess the nature of articulatory and occlusal relations of the dentition.
6. Determine the type of bite.
7. Assess the condition of the mucous membrane.
8. Assess the condition of the jaw bones.
9. Examine the condition of the muscles of the maxillofacial area.
10. Examine the condition of the temporomandibular joint.
11. Assess the condition of the patient's existing orthopedic structures.
12. Analyze the results of X-ray examination of the dental system on a panoramic image.
13. Analyze the results of X-ray examination of the dental system on a dental image.
14. To prepare the tooth for the manufacture of an artificial metal crown.
15. Prepare the tooth for the manufacture of a plastic crown.
16. Prepare the tooth for the manufacture of a solid crown.
17. To prepare the tooth for the manufacture of metal-plastic crown.
18. To prepare the tooth for the manufacture of metal-ceramic crowns.
19. Carry out the preparation of the tooth to make the tab.
20. Prepare the tooth root for the manufacture of a pin structure.
21. Get a complete anatomical impression with a standard spoon of plaster.
22. Obtain a complete anatomical impression with a standard spoon of elastic impression mass.
23. Obtain a complete anatomical impression with a standard spoon of silicone impression mass.
24. Check and correct the metal stamped crown in the mouth.
25. Check and correct the plastic crown in the mouth.
26. Check and correct the metal-plastic crown in the oral cavity.
27. Carry out inspection and correction of the metal-ceramic crown in the oral cavity.

28. Carry out inspection and correction of stamped-brazed bridge in the oral cavity.
29. To check and correct the metal-plastic bridge in the oral cavity.
30. Check and correct the metal-ceramic prosthesis in the oral cavity.
31. Fix the stamped crown on permanent cement.
32. Fix the plastic crown with permanent cement.
33. Fix the metal-ceramic crown on permanent cement.
34. Fix the metal-plastic crown on permanent cement.
35. Fix the stamped-brazed bridge on permanent cement.
36. To fix the metal-plastic bridge prosthesis on permanent cement.
37. To fix metal-ceramic bridge prosthesis on permanent cement.
38. Remove the stamped crown.
39. Remove the plastic crown.
40. Remove the solid crown.

List of theoretical questions for the semester final certification

1. Indications and clinical and laboratory stages of making tabs.
2. Components of the chewing apparatus, their characteristics.
3. Phases of adaptation to partial removable dentures.
4. Indications and clinical and laboratory stages of making clasp prostheses.
5. Vertical movements of the lower jaw.
6. Assessment of the condition of the teeth during the examination of the patient.
7. Indications and clinical and laboratory stages of manufacturing a stamped metal crown.
8. Five of Hanau.
9. Examination and examination of the patient's face.
10. Indications and clinical and laboratory stages of manufacturing a combined crown.
11. Bonville's laws.
12. Assessment of the condition of the dentition during the examination of the patient.
13. Indications and clinical and laboratory stages of making a plastic crown.
14. Phases of the Giza chewing cycle.
15. Assessment of the condition of the oral mucosa during the examination of the patient.
16. Indications and clinical and laboratory stages of making pin teeth.
17. Anatomical and functional features of the dental system with partial tooth loss.
18. Means and indications for the use of various types of analgesia.
19. Indications and clinical and laboratory stages of making a solid crown.
20. Methods of preparing the oral cavity for prosthetics.
21. Errors and complications during anesthesia.
22. Indications and clinical and laboratory stages of manufacturing a metal-plastic crown.
23. Transverse movements of the lower jaw.
24. Orthopedic treatment plan.

25. Indications and clinical and laboratory stages of manufacturing a metal-ceramic crown.
26. Classification of tooth cavities according to Black.
27. History of the disease (outpatient card) of a dental orthopedic patient: rules of registration.
28. Indications and clinical and laboratory stages of manufacturing a stamped-brazed bridge.
29. Sagittal movements of the lower jaw.
30. Static method for determining masticatory efficiency according to Agapov.
31. Indications and clinical and laboratory stages of manufacturing a solid bridge.
32. Classification of dentition defects by the number of missing teeth in the defect.
33. Functional methods for determining masticatory efficiency.
34. Indications and clinical and laboratory stages of manufacturing a metal-plastic bridge prosthesis.
35. Classification of dentition defects according to Kennedy.
36. Apparatus that reproduce the movements of the lower jaw.
37. Indications and clinical and laboratory stages of manufacturing a metal-ceramic bridge prosthesis.
38. Aplegate Rules (1954) for the application of the Kennedy classification.
39. Mastication.
40. Indications and clinical and laboratory stages of manufacturing a partial removable plate prosthesis.
41. Dental arches.
42. Electromyography.
43. The state of physiological rest of the lower jaw.
44. Gnatodynamometry.
45. Occlusion: types of occlusion.
46. Galvanometry.
47. Physiological types of occlusion.
48. Radiography.
49. Pathological types of occlusion.
50. Parallelometry.
51. Buttresses of the upper jaw.
52. Casting of dentures.
53. Trajectories of the lower jaw.
54. Computed tomography.
55. Topography of the transition fold.
56. Types of prosthetics (immediate, nearest, remote).
57. Zones of susceptibility of the mucous membrane of the hard palate according to Lund.
58. Determination of central occlusion in groups I-II of complexity according to Betelman.
59. Classification Suple.
60. Determination of central occlusion in group III complexity according to Betelman.

61. Facial muscles of the maxillofacial area.
62. Psychological preparation of the patient before prosthetics.
63. Chewing muscles of the maxillofacial area.
64. General rehabilitation measures before prosthetics.
65. Temporomandibular joint.
66. Special therapeutic preparation of the oral cavity before prosthetics.
67. Diagnosis. Rationale and formulation of the diagnosis.
68. Special surgical preparation of the oral cavity before prosthetics.
69. Signs of central occlusion.
70. Special orthopedic and orthodontic preparation of the oral cavity before prosthetics.
71. The Popov-Godon phenomenon.
72. Static method for determining masticatory efficiency according to Oxman.
73. Dissection-free method of manufacturing bridges.
74. Compensation curves in orthognathic occlusion.
75. Methods of preparation of the oral cavity for prosthetics with partial removable prostheses.

List of practical skills for semester final certification

1. Find out the reasons for the patient's visit to the orthopedic dentistry clinic (complaints, medical history, life history).
2. Examine and examine the face.
3. Examine the condition of the teeth.
4. Examine the condition of the dentition.
5. Assess the nature of articulatory and occlusal relations of the dentition.
6. Determine the type of bite.
7. Assess the condition of the mucous membrane.
8. Assess the condition of the jaw bones.
9. Examine the condition of the muscles of the maxillofacial area.
10. Examine the condition of the temporomandibular joint.
11. Assess the condition of the patient's existing orthopedic structures.
12. Analyze the results of X-ray examination of the dental system on a panoramic image.
13. Analyze the results of X-ray examination of the dental system on a dental image.
14. To prepare the tooth for the manufacture of an artificial metal crown.
15. Prepare the tooth for the manufacture of a plastic crown.
16. Prepare the tooth for the manufacture of a solid crown.
17. To prepare the tooth for the manufacture of metal-plastic crown.
18. To prepare the tooth for the manufacture of metal-ceramic crowns.
19. Carry out the preparation of the tooth to make the tab.
20. Prepare the tooth root for the manufacture of a pin structure.
21. Get a complete anatomical impression with a standard spoon of plaster.
22. Obtain a complete anatomical impression with a standard spoon of elastic impression mass.

23. Obtain a complete anatomical impression with a standard spoon of silicone impression mass.
24. Check and correct the metal stamped crown in the mouth.
25. Check and correct the plastic crown in the mouth.
26. Check and correct the metal-plastic crown in the oral cavity.
27. Carry out inspection and correction of the metal-ceramic crown in the oral cavity.
28. Carry out inspection and correction of stamped-brazed bridge in the oral cavity.
29. To check and correct the metal-plastic bridge in the oral cavity.
30. Check and correct the metal-ceramic prosthesis in the oral cavity.
31. Fix the stamped crown on permanent cement.
32. Fix the plastic crown with permanent cement.
33. Fix the metal-ceramic crown on permanent cement.
34. Fix the metal-plastic crown on permanent cement.
35. Fix the stamped-brazed bridge on permanent cement.
36. To fix the metal-plastic bridge prosthesis on permanent cement.
37. To fix metal-ceramic bridge prosthesis on permanent cement.
38. Remove the stamped crown.
39. Remove the plastic crown.
40. Remove the solid crown.
41. Assess the condition of the mucous membrane of a patient with partial tooth loss.
42. Assess the condition of the jaw bones of a patient with partial tooth loss.
43. Determine and substantiate the indications for the manufacture of partial removable plate prostheses.
44. On the plaster model of the mandible to draw the boundaries of the partial removable plate prosthesis with the included defects of the dentition.
45. On the plaster model of the mandible to draw the boundaries of a partial removable plate prosthesis with distal-unlimited defects of the dentition.
46. On the plaster model of the upper jaw to draw the boundaries of the partial removable plate prosthesis with the included defects of the dentition.
47. On the plaster model of the upper jaw to draw the boundaries of a partial removable plate prosthesis with distal-unlimited defects of the dentition.
48. Obtain a complete anatomical impression of plaster for the manufacture of a partial removable plate prosthesis.
49. Obtain a complete anatomical impression of the elastic mass for the manufacture of a partial removable plate prosthesis.
50. Justify the choice of designs of partial removable plate prosthesis and means of its fixation.
51. Determine the central occlusion in group I defects according to Bethelman.
52. Determine the central occlusion in the second group of defects according to Betelman.
53. Determine the central occlusion in group III defects according to Bethelman.
54. Determine the height of the bite.

55. Check the correctness of the determination of the central occlusion in the manufacture of a partial removable plate prosthesis.
56. Check the correct placement of teeth in the manufacture of a partial removable plate prosthesis.
57. Check the design of the partial removable plate prosthesis in the articulator.
58. Correct the boundaries of the partial removable plate prosthesis.
59. To correct occlusal contacts of a partial removable plate prosthesis.
60. Carry out the repair of a partial removable plate prosthesis outside the laboratory method.
61. Determine and justify the indications for the manufacture of clasp prosthesis.
62. Justify the choice of clasp prosthesis design.
63. Get an impression for making a clasp prosthesis.
64. Prepare for work and describe the structural elements of the parallelometer.
65. Determine the location of abutment and retention zones on abutment teeth.
66. Checking the frame of the clasp prosthesis on the working model of the mandible.
67. Checking the frame of the clasp prosthesis on the working model of the upper jaw.
68. Fit the frame of the clasp prosthesis in the oral cavity.
69. Check of occlusal contacts when applying a clasp prosthesis.
70. Relocate the clasp prosthesis.

Teaching methods

- verbal/verbal (lectures, explanation, story, conversation, instruction);
- visual (observation, illustration, demonstration);
- practical (various types of exercises, performing medical dental manipulations, practices);
- explanatory and illustrative - involves the presentation of ready-made information by the teacher and its assimilation by students of higher education;
- problematic presentation;
- presentations;
- conversations and thematic discussions;
- electronic lectures;
- partially searchable;
- remote consultations.

Form of final control of learning success - semester final certification (SPA)

Current and final control system.

Current control system.

Current control is carried out at each practical lesson in accordance with the specific objectives of each topic in the form of oral interviews, solving situational problems, assessment of manipulations, written control, software computer testing.

Upon mastering each topic of the module for the current educational activity, the applicant is given grades on a four-point traditional scale, which are then converted into ECTS scores. The maximum number that can be obtained by a higher education student in the practical classes of the module is 120 points.

The assessment of the applicant corresponds to the ratio of the level of professional and general competencies established in the assessment to the planned learning outcomes. At the same time, standardized generalized criteria for assessing the knowledge of higher education seekers are used (Table 1).

Table 1.Standardized generalized criteria for assessing the knowledge of higher education students in PDMU

On a 4-point scale	Assessment in ECTS	Evaluation criteria
5 (excellent)	AND	The student shows special creative abilities, is able to acquire knowledge independently, without the help of the teacher finds and processes the necessary information, is able to use the acquired knowledge and skills for decision-making in unusual situations, convincingly argues answers, independently reveals own talents and inclinations, possesses not less than 90 % of knowledge on the topic both during the survey and all types of control.
4 (good)	IN	The student is fluent in the studied amount of material, applies it in practice, freely solves exercises and problems in standardized situations, self-corrects errors, the number of which is insignificant, has at least 85% knowledge of the topic both during the survey and all types of
	WITH	Getter education is able compare, generalize, to systematize information under the guidance of scientific and pedagogical employee, in in general independently apply it in practice, control your own activity; to correct mistakes, among which there are significant ones, to choose arguments to confirm opinions, has at least 75% of knowledge on the topic both during the survey and all types of control.
3 (satisfactory)	D	The student reproduces a significant part of the theoretical material, shows knowledge and understanding of the basics with scientific and pedagogical the employee can analyze the training material, correct errors, among which there is a significant number of significant, has at least 65% knowledge of the topic as during the survey, and all types of control.
	IS	The student has the educational material at a level higher than the initial, a significant part of it reproduces at the reproductive level. has at least 60% knowledge of the topic both during the survey and all types of control.

2 (unsatisfactory)	FX	The student has the material at the level of individual fragments that make up a small part of the material, has less than 60% knowledge of the topic both during the survey and all types of control.
	F	The student has the material at the level of elementary recognition and reproduction of individual facts, elements, has less than 60% knowledge of the topic as during the survey, and all types of control.

Final modular control system

Applicants for higher education who have scored the required minimum number of points during the current control (average grade point average 3.0 and above), do not have missed vacancies for lectures and practical classes, have mastered the topics made for independent work within the module.

The form of final modular control (PMC) consists of three stages:

Stage 1 - test control of knowledge.

Applicants for higher education give answers to standardized test tasks from the Step-2 database (on electronic media), which include 10 tests (10 minutes). Each task has only one correct answer out of five. Applicants for higher education, who gave less than 60% of correct answers to the test tasks, are not allowed to compile the theoretical part of the PMC.

Stage 2 - oral examination.

Each of applicant for higher education two questions of the examination ticket are offered, necessarily including questions on topics that are submitted for self-study within the module and a practice-oriented question.

Stage 3 - assessment of practical skills.

Carried out in accordance with the approved algorithm of practical skills during the clinical admission of patients or in conditions close to real - on phantoms, visual aids, diagnostic models. It can be held at the last practical lesson, which precedes the PMC.

Applicants for higher education who during the study of the module, which is the final control, had an average score of current performance from 4.50 to 5.0 are exempt from PMK and automatically (by agreement) receive a final grade in accordance with table 2, with the presence of the applicant education at the PMC is mandatory linguistic. In case of disagreement with the assessment, this category of higher education seekers is PMK according to the general rules.

Table №2. Unified table of correspondence of points for the current one performance, PMC scores, exam, and traditional four-point score.

Average score for current performance (AND)	Points for current success in the module (A * 24)	Points for PMK from the module (A * 16)	Points for the module and / or exam (A * 24 + A * 16)	ECTS category	On a 4-point scale
2	48	32	80	F FX	2 unsatisfactory
2.1	50	34	84		

2.15	52	34	86		
2.2	53	35	88		
2.25	54	36	90		
2.3	55	37	92		
2.35	56	38	94		
2.4	58	38	96		
2.45	59	39	98		
2.5	60	40	100		
2.55	61	41	102		
2.6	62	42	104		
2.65	64	42	106		
2.7	65	43	108		
2.75	66	44	110		
2.8	67	45	112		
2.85	68	46	114		
2.9	70	46	116		
2.95	71	47	118		
3	72	50	122	E	3 satisfactory
3.05	73	50	123		
3.1	74	50	124		
3.15	76	50	126		
3.2	77	51	128		
3.25	78	52	130	D	
3.3	79	53	132		
3.35	80	54	134		

3.4	82	54	136		
3.45	83	55	138		
3.5	84	56	140	C	4 good
3.55	85	57	142		
3.6	86	58	144		
3.65	88	58	146		
3.7	89	59	148		
3.75	90	60	150		
3.8	91	61	152		
3.85	92	62	154		
3.9	94	62	156		
3.95	95	63	158		
4	96	64	160	B	
4.05	97	65	162		
4.1	98	66	164		
4.15	100	66	166		
4.2	101	67	168		
4.25	102	68	170		
4.3	103	69	172		
4.35	104	70	174		
4.4	106	70	176		
4.45	107	71	178		
4.5	108	72	180	A	5 excellent
4.55	109	73	182		
4.6	110	74	184		
4.65	112	74	186		
4.7	113	75	188		
4.75	114	76	190		
4.8	115	77	192		
4.85	116	78	194		
4.9	118	78	196		
4.95	119	79	198		
5	120	80	200		

The PMC score is evaluated in points and is not converted into a traditional 4-point score. The maximum number of PMK points is 80 points. The minimum number of PMK points at which the control is considered to be made is 50 points. The maximum number of points for the module is 200 points (up to 120 points for current performance). The obtained points for the module are displayed in the "Statement of final module control" and the individual curriculum of the applicant. The applicant of higher education has the right to compile and 2 re-compile PMK.

Semester exam system (SPA)

The semester exam is held according to a separate schedule, which is approved by the first vice-rector for educational and pedagogical work.

Applicants for higher education who do not have unfulfilled missed classes, scored a minimum of at least 72 (which corresponds to an average score of 3.0 for current performance), passed all PMCs in the discipline (except the last and completed all requirements for the discipline, which are provided by the working, curriculum for the discipline.

The exam is held in one day in two stages: computer testing and theoretical component. At the first stage, on the day of the exam in the cathedral computer class, higher education students are tested on 20 questions (execution time - 20 minutes) from the base of Step 2 for the relevant discipline. Each correct answer for the test task when compiling the computer control is counted as 1 point (maximum in the amount for the first stage, respectively 20 points). The result of the computer control by the applicant of higher education is not a ground for not admitting him to the theoretical part of the examination. The examination ticket for each discipline contains three specific basic theoretical (practice-oriented) questions. The questions cover the most important sections of the working curriculum, which are sufficiently covered in the literature, recommended as basic (basic) in the study of the discipline. Each question of the examination ticket is evaluated within 0-20 points. As a result of passing the computer control and the theoretical part of the exam, the student is given' a total score from 0 to 80 points.

Applicants for higher education who during the study of the discipline from which the exam was conducted had an average score of 4.5 to 5.0 are exempt from the exam and automatically (with consent) receive a final grade in accordance with table 2, with the presence of the applicant at exams are required. In case of disagreement with the assessment, the specified category of applicants for higher education takes the exam according to the general rules.

The applicant of higher education has the right to retake the exam no more than 2 times and only during the examination session. The result of re-talcing the exam is certified by the signatures of the members of the commission in the test-examination statement.

Control methods

In studying the discipline "Orthopedic Dentistry" Module 1. Prosthetics with fixed dentures, Module 2. Prosthetics with partial removable dentures (SPA) uses the following control methods: oral control, written, test, programmed control, as well as methods of self-control and self-assessment.

Oral control (oral examination). Oral interview involves the following sequence: formulation of questions (tasks) taking into account the specifics of the subject and the requirements of the program; preparation of higher education students for the answer and presentation of knowledge; adjustment of the knowledge stated in the process of answering; analysis and evaluation of the response. According to the

relevance of the questions for oral examination are divided into basic, additional and auxiliary.

Written control. Its purpose is to clarify in writing the degree of mastery of higher education knowledge, skills and abilities in the discipline, to determine their quality - accuracy, precision, awareness, the ability to apply theoretical knowledge in practice.

Test control. To determine the level of formation of knowledge and skills, open-ended tests (with freely constructed answers) and closed-form tests (with suggested answers) are used.

Programmable control. It is implemented by presenting to all applicants for higher education standard requirements, which is ensured by the use of the same number and complexity of control tasks, questions.

Method of self-control. Its essence is the conscious regulation by applicants for higher education of their activities to ensure such results that would meet the objectives, requirements, norms, rules, patterns. The purpose of self-control is to prevent mistakes and correct them.

Self-assessment method. Provides a critical attitude of the applicant to their abilities and capabilities, an objective assessment of the results achieved.

Methodical support

Information and teaching support meet the licensing conditions of educational activities for the training of specialists at the second (master's) level of higher education and includes: schedule, curriculum, work program of the discipline, thematic plans of lectures, practical classes, guidelines for teachers, methodical development of lectures and instructions on the organization of independent work of higher education seekers, syllabuses, criteria for assessing knowledge, lists of questions for the current, final controls and SPA, list of situational and test tasks, list of recommended educational literature, etc.

Recommended books

Basic (available in the PDMU library)

1. Anusavice K J . Phillips’Science of Dental Materials. 1 led. - Elsevier -2007-805 p.
2. Bernard Levin, Glenn D. Richardson. Complete Denture Prosthodontics: A Manual For Clinical Procedures.. 17th Edition.- University Of Southern California School Of Dentistry. -2002.-172 p.
3. Dvornylc V.M. Optimization of clinical and laboratory stages of making of complete removable dentures depending on the condition of the tissues of foundation areas. - Lviv: Publisher Marchenko T.V.- 2020.
4. M.D. Korol. Propedeutics of orthopedic stomatology .-Vinnitsya-NOVA KNIGA- 2009- 200 p.
5. S.F.Rosenstiel, M.F.Land, J.Fujimoto. Contemporary Fixed Prosthodontics. 3 ed.- Mosby.-2004.-830 p.
6. W.J.O’Brion. Dental Materials and Their Selection. - Quintess. - 2002-395 p.

Auxiliary

1. Hayakawa. Principles and Practices of Complete Dentures. Quintessence.- 2002.
2. McGivney G.P., Carr A.B. McCrackens Removable Partial Prosthodontics. - Mosby,

2001**.**

3. Pasler F A. Color Atlas of Dental Medicine. Radiology. - Thieme. - 2006.
4. Phoenix R. D., Cagna D.R., DeFreest C.F. Stewart's clinical removable partial prosthodontics. - Quintessence. - 2008.
5. Shillingburg H.T., Hobo S., Whisett L.D., Jacobi R., Brackett S.E. Fundamentals of Fixed Prosthodontics. -Third Ed., - Quintess. Publ. – 1997. - P. 1-119.

Information resources

1. Official Web-site of PSMU www.pdmu.edu.ua/

Developers

Developers of syllabus in the discipline "Orthopedic Dentistry" Module 1. Prosthetics with non-removable dentures, Module 2. Prosthetics with partial removable dentures (SPA): Candidate of Medical Sciences, Docent Korobeynikov LS, Candidate of Medical Sciences, Docent Kozak RV, Doctor of Medical Sciences, Professor Korol DM