

**DANYLO HALYTSKYI  
LVIV NATIONAL MEDICAL UNIVERSITY**

**Prosthetic Dentistry Department**



**APPROVED**

First Vice-Rector of scientific  
and pedagogical work  
Iryna SOLONYNKO

*[Signature]*  
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2023 p.

**EDUCATIONAL DISCIPLINE PROGRAM  
SB 3.5.4**

**PROSTHETIC DENTISTRY including IMPLANTOLOGY  
individual profile course of practical training" Pediatric Dentistry"**

**Competence Course for Specialists**

**in Second (Master's) Level of Higher Education**

**Field of knowledge 22 "Health Care"**

**Specialty 221 "Dentistry"**

**for 5th year students of Dentistry faculty**

Discussed  
and approved  
at the methodical meeting of  
Orthopedic dentistry department  
Protocol № 6  
from 15<sup>th</sup> of June 2023  
Head of the Department  
Assoc.Prof. Victor KUKHTA



Approved at the  
profile methodical commission  
in dental disciplines  
Protocol № 2  
from 16<sup>st</sup> of June 2023  
Chairman of the profile methodical  
commission  
Prof. Yan VARES

*[Signature]*  
*[Signature]*



PROGRAM DEVELOPERS: Prof., Ph.D. Andriy Kordiak, Assoc. Prof. Viktor Kukhta , Assoc. Prof., Telishevska U.D., Assoc. Prof., Klyuchkovska N.R., Assoc. Prof., Styranivska O.J.

REVIEWERS: Head teacher of Therapeutic Dentistry Department of LNMU named after Danylo Halytskoho Assoc. Prof., Assoc., Candidate of Medical Sciences Prof., Buchkovska A.Y.  
Head teacher of Pediatric Dentistry Department of LNMU named after Danylo Halytskoho Assoc. Prof., Candidate of Medical Sciences Girchak G.V.

## INTRODUCTION

The program of study of the discipline  
**BB 3.5.4 PROSTHETIC DENTISTRY, INCL. IMPLANTOLOGY**  
 Individual profile course of practical training (IPCPP) "Pediatric Dentistry"  
 According to the Standard of higher education of the second (master's) level  
 Field of knowledge 22 "Health Care"  
 Specialty 221 "Dentistry"

### Description of the discipline (abstract)

Prosthetic dentistry incl. implantology, anesthesiology and emergency and urgent medical aid is a discipline that enables students to master in the clinic certain dental manipulations used in treatment of patients with defects of the crown of the teeth, with partial and complete tooth loss and defects and deformations of the dental-maxillary system. Acquired in this way special (professional) competencies students later use in the treatment process dental patients of prosthetic profile.

The subject of study of the discipline is prosthetic treatment of diseases dental-maxillary system:

Structure training discipline	Number of credits, hours, of them				Year training semester	View control
	Total	Classroom		SW		
		Lectures (hours)	Practical x to occupy (hours)			
<b>Prosthetic and dentistry</b>	<b>5 credits / 150hours</b>	----	<b>78</b>	<b>72</b>	<b>V year teaching</b>	<b>Test</b>

- defects of the coronal part of individual teeth
- partial loss of teeth
- complete loss of teeth
- tooth-jaw defects and deformations
- pathology of the TMJ

### Interdisciplinary links: Prosthetic dentistry as a discipline

- a) is based on previous study of human anatomy by students; histology, embryology and cytology, medical biology, medical chemistry, biological and bioorganic chemistry, medical physics, microbiology, virology and immunology and integrates with these disciplines;
- b) is based on the study by students of propaedeutic disciplines of dentistry profile: propaedeutics of Prosthetic dentistry, propaedeutics of therapeutic dentistry and propaedeutics of pediatric therapeutic dentistry and integrates with these disciplines;
- c) integrates with the following clinical disciplines: prevention dental diseases, pediatric therapeutic dentistry and therapeutic dentistry, surgical dentistry.

### 1. The purpose and objectives of the discipline

1.1 The purpose of the study of Prosthetic dentistry - the formation of the foundations of clinical doctor's thinking, mastering the skills of examination and logical justification of the diagnosis, conducting differential diagnosis of diseases of the dental and maxillofacial system Prosthetic profile, drawing up a treatment plan for patients, mastering the basics manual skills in Prosthetic treatment.

The ultimate goals are set on the basis of the OPP training of the doctor in the specialty, respectively to the block of its semantic module (professional and practical training) and is the basis

for construction of the content of the discipline. The description of the goals is formulated through the ability to in the form of target tasks (actions). Based on the end goals for each module or content module formulated specific goals in the form of certain skills (actions), target tasks that ensure the achievement of the ultimate goal of studying the discipline.

1.2. The main tasks of studying the discipline "Prosthetic Dentistry" are:

- To form the volume of basic, fundamental medical knowledge that form the professional competencies of a dentist-orthopedist.
- To form and improve the professional training of a dentist- an orthopedist with clinical thinking, well versed in pathology, having knowledge of related disciplines.
- To form skills in mastering new technologies and methods in the field Prosthetic dentistry.
- To prepare a specialist for independent professional medical diagnostic activity that can perform differential diagnosis, provide medical care, carry out preventive and rehabilitation measures to save the life and health of the patient.

***As a result of studying the discipline the student must***

***Be able:***

- to examine the dental patient;
- determine the scope and sequence of special diagnostic measures, evaluate them results;
- to interpret the functional anatomy of the dental apparatus;
- apply the basic principles of asepsis, antiseptics, anesthesia;
- diagnose emergencies in the Prosthetic dentistry clinic;
- provide the necessary emergency care in the clinic of Prosthetic dentistry;
- analyze the results of basic and additional methods of dental examination
- a patient in an Prosthetic dentistry clinic;
- substantiate and formulate a preliminary clinical diagnosis in an Prosthetic clinic
- dentistry;
- to examine patients by functional methods;
- substantiate and formulate the syndrome diagnosis in the clinic of Prosthetic dentistry;
- identify the main syndromes and symptoms in the clinic of Prosthetic dentistry;
- to make the final clinical diagnosis of the main diseases in the Prosthetic clinic
- dentistry;
- to make and substantiate the plan of complex stomatologic treatment and the plan Prosthetic rehabilitation, formulate indications and contraindications to Prosthetic treatment;
- identify different clinical variants and complications of the most common diseases Prosthetic dentistry clinic;
- explain the principles of restorative Prosthetic treatment and rehabilitation in
- maxillofacial patients;
- to plan the Prosthetic stage of complex treatment of patients with the disease periodontium, with deformations of the dentition, increased abrasion of the hard tissues of the teeth with taking into account individual features and clinical course of the main dental diseases;
- to conduct Prosthetic treatment of major dental diseases;
- to interpret the general principles of treatment of patients with various defects of hard tissues teeth, dentition and other pathology of the dental system;
- demonstration of mastery of moral and deontological principles of a medical specialist and principles of professional subordination in the clinic of Prosthetic dentistry.

***Know:***

- principles of Prosthetic treatment of defects of hard tissues of teeth with inlays;
- principles of Prosthetic treatment of defects of hard tissues of teeth with veneers;
- principles of application of metal-free crowns;
- principles of Prosthetic treatment of defects of hard tissues of teeth artificial

- crowns with a metal base;
- principles of Prosthetic treatment of dentition defects with the use of modern ones
- technologies for the manufacture of fixed dentures: solid, metal-ceramic,
- metal composite, metal-free bridges;
- principles of Prosthetic treatment of dentition defects with the use of adhesives
- bridges (features of dissection, fingerprinting, fixation of the finished structures;
- principles of Prosthetic treatment of dentition defects with dentures with different types
- clasp fixing system;
- principles of Prosthetic treatment of dentition defects with removable dentures
- mechanical fixing (telescopic, locking, beam fixing systems);
- principles of Prosthetic treatment of dentition defects with the use of implantation;
- principles of examination of dentition occlusion: study of occlusal contacts in the mouth
- cavity and on models, determination of bite height, determination of central occlusions;
- principles of Prosthetic treatment of periodontal diseases using different
- kind of Prosthetic structures;
- principles of Prosthetic treatment of patients with complete loss of teeth with the use
- modern methods;
- principles of differential diagnosis, treatment and prevention of diseases that
- caused by denture materials: galvanosis, allergic stomatitis, toxic
- chemical stomatitis;
- principles of fixation of removable and non-removable structures of prostheses on implants;
- principles of Prosthetic treatment with the use of shaping and replacement
- prostheses;
- principles of Prosthetic treatment with the use of facial ectoprostheses;
- principles of Prosthetic treatment with the use of dentures based on
- implants;
- principles of diagnosis and Prosthetic treatment of TMJ diseases.

#### **Competences and learning outcomes**

According to the requirements of the Standard of Higher Education, the discipline "Prosthetic Dentistry" provides acquisition of competencies by students:

##### **integral:**

Ability to solve problems and problems in the field of health care by specialty "Dentistry" in professional activities or in the learning process, which involves conducting research and / or innovation.

##### **General competencies (GQ):**

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 practical activities.
4. Ability to communicate in the national language both orally and in writing.
5. Ability to communicate in English.
6. Skills in using 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. Ability to be critical and self-critical.
11. Ability to work in a team.
12. Efforts to preserve the environment.
13. The ability to act socially responsibly and consciously.

14. The ability to realize one's rights and responsibilities as a member of society, to realize the values of a civil (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.

15. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on an understanding of 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, equipment and technologies, to use various types and forms of motor activities for active recreation and leading a healthy lifestyle.- special (professional, subject) (FC):

**Professional competences:**

1. Ability to collect medical information about the patient and analyze clinical data.
2. Ability to interpret the results of laboratory and instrumental research.
3. Ability to diagnose: determine preliminary, clinical, final, accompanying diagnosis, emergency conditions.
4. Ability to plan and carry out measures for the prevention of diseases of the organs and tissues of the oral cavity and maxillofacial region.
5. Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of diseases of the organs and tissues of the oral cavity and maxillofacial area.
6. The ability to determine a rational regimen of work, rest, and diet in patients in the treatment of diseases of the organs and tissues of the oral cavity and maxillofacial region.
7. The ability to determine the management tactics of patients with diseases of the organs and tissues of the oral cavity and maxillofacial region with accompanying somatic diseases.
8. Ability to perform medical and dental manipulations.
9. The ability to treat the main diseases of the organs and tissues of the oral cavity and maxillofacial area.
10. Ability to organize and carry out medical evacuation measures.
11. Ability to determine tactics, methods and provision of emergency medical assistance.
12. Ability to organize and conduct a screening examination in dentistry.
13. The ability to assess the impact of the environment on the state of health of the population (individual, family, population).
14. Ability to maintain normative medical documentation.
15. Processing of state, social and medical information.
16. Ability to organize and carry out rehabilitation measures and care for patients with diseases of the oral cavity and ASHL.
17. The ability to legally support one's own professional activity.
18. The ability to provide pre-medical care according to the protocols of tactical medicine.

**Competence matrix**

General competencies as required by the National Qualifications Framework (NQF)

		Knowledge	Skills	Whomnoway	Autonomy and responsibility
ZK1	Ability to abstract thinking, analysis and synthesis; ability to learn and be modern trained.	+	+	+	+
ZK2	Knowledge and understanding of the subject area and understanding of the profession.	+	+		+
ZK3	Ability to apply knowledge in practice situations	+	+	+	+
ZK4	Ability to communicate in the state language as	+	+	+	

	orally and in writing. Ability to communicate in another language.				
ZK5	Skills of using information and communication technologies.	+	+	+	+
ZK6	Ability to search, process and analyze information from various sources.	+	+	+	+
ZK7	Ability to adapt and act in a new situation; ability to work autonomously.	+	+	+	+
ZK8	Ability to identify, set and decide problems.		+		+
ZK9	Ability to choose a communication strategy			+	+
ZK10	Ability to work in a team.			+	+
ZK11	Interpersonal skills			+	+
ZK12	Ability to act on the basis of ethical considerations (motives)	+	+	+	+
ZK13	Skills for safe activities	+	+	+	+
ZK14	Ability to assess and ensure quality work performed.	+	+	+	+
ZK15	The desire to preserve the environment environment.	+	+	+	+
ZK16	Ability to act socially responsibly and civic conscious		+	+	+
FC1	Ability to collect medical information about the patient and analyze clinical data.	+	+	+	+
FC2	Ability to diagnose: determine preliminary, clinical, final, concomitant diagnosis, emergencies.	+			+
FC3	Ability to interpret the result laboratory and instrumental research.	+	+	+	+
FC4	Ability to plan and implement measures for the prevention of organ diseases and tissues of the oral cavity and maxillofacial facial area.	+	+	+	+
FC5	Ability to design the process medical care: to determine approaches, plan, types and principles of treatment diseases of the organs and tissues of the mouth cavity and maxillofacial region	+	+	+	+

FC6	Ability to determine management tactics patients with diseases of organs and tissues oral cavity and maxillofacial areas with concomitant somatic diseases	+	+	+	+
FC7	Ability to determine the rational mode of work, rest, diet in patients with treatment of diseases of organs and tissues oral cavity and maxillofacial area	+	+	+	
FC8	Ability to perform medical and dental manipulations	+	+	+	+
FC9	Ability to carry out treatment major diseases of organs and tissues oral cavity and maxillofacial area.	+	+	+	+
FC10	Ability to organize and conduct medical and evacuation measures	+	+	+	+
FC11	Ability to determine tactics, methods and providing emergency medical assistance	+	+	+	+
FC12	Ability to organize and conduct screening examination in dentistry	+	+	+	+
FC13	Ability to assess impact environment for health population (individual, family, population).	+	+	+	+
FC14	Ability to conduct regulatory medical records	+			+
FC15	Elaboration of state, social and medical information	+	+	+	+
FC16	Ability to organize and conduct rehabilitation measures and care in patients with diseases of the oral organs cavity and SHLO		+	+	+
FC17	Ability to provide legal support own professional activity				
FC18	Ability to provide home care assistance according to tactical protocols medicine	+	+	+	+

**Program learning outcomes**

Integrative final program learning outcomes, the formation of which is facilitated by the curriculum discipline:

Normative and variable content of training, formulated in terms of results teaching



<b>Learning outcomes in the cognitive sphere</b>		
ПНН 1	Identify and identify leading clinical symptoms and syndromes; by standard techniques using previous data patient history, patient examination data, knowledge about man, his organs and systems, establish a probable nosological or syndromic preliminary clinical diagnosis dental disease	3K1 – 3K9, 3K-11, 3K12, 3K14, 3K16, ФK1, ФK3, ФK4 ФK15
ПНН 2	Collect information on the general condition patient, evaluate psychomotor and physical development of the patient, condition of organs maxillofacial area, at the base laboratory and instrumental results research to evaluate information on diagnosis	3K1 – 3K14, 3K11 – 3K14, 3K16, ФK1-ФK8, ФK11, ФK12, ФK14 -ФK16
ПНН 3	Assign and analyze additional (mandatory and optional) survey methods (laboratory, radiological, functional and / or instrumental) according to list 5, patients with diseases of the organs and tissues of the mouth cavity and maxillofacial area for conducting differential diagnosis Diseases	3K1 – 3K4, 3K7 – 3K14, ФK1, ФK2, ФK15
ПНН 4	Determine the final clinical diagnosis adhering to the relevant ethical and legal norms, by adoption reasonable decision and logical analysis obtained subjective and objective data clinical, additional examination, carrying out differential diagnostics under control of the head doctor in the conditions medical institution	3K1 – 3K10, 3K14, 3K16, ФK1 – ФK4, ФK15
ПНН 5	Diagnose emergencies by any circumstances (at home, on the street, in medical institution), in an emergency situation, martial law, lack of information and limited time	3K1 – 3K11, 3K13 – 3K16, ФK1 – ФK4, ФK15
ПНН 6	Plan and implement prevention measures dental diseases among the population to prevent spread dental diseases	3K1 – 3K16, ФK1, ФK5, ФK13 – ФK16
ПНН 7	Analyze the epidemiological situation and to carry out actions of mass and individual, general and local drug and non-drug prophylaxis dental diseases	3K1 - 3K6, 3K8 - 3K16, FC1, FC5, FC13 - FC16
ПНН 8	Define the approach, plan, type and principle treatment of dental disease by making an informed decision for existing algorithms and standard schemes	3K1 - 3K3, 3K6 - 3K8, 3K12-3K14, 3K16, FC1, FC6, FC15
ПНН 9	Determine the nature of the mode of work, rest and the necessary diet for treatment dental diseases on the basis preliminary or final clinical diagnosis by making a reasonable solutions according to existing algorithms and standard schemes.	3K1 – 3K13, 3K15, 3K16, ФK1, ФK7, ФK15



ПНН 10	Determine the tactics of dental patient with somatic pathology by making an informed decision for existing algorithms and standard Schemes	3K1 – 3K8, 3K10, 3K12 – 3K14, 3K16, ФК1, ФК7, ФК8, ФК15
ПНН 11	Carry out basic treatment dental diseases for existing ones algorithms and standard schemes under control of the head doctor in the conditions medical institution	3K1-3K4, 3K7 – 3K16, ФК1, ФК9, ФК10, ФК15
ПНН 12	Organize medical evacuation measures among the population, servicemen, in an emergency situations, including martial law, during detailed stages of medical evacuation, with taking into account the existing system of medical evacuation support	3K1 – 3K16, ФК1, ФК11, ФК15
ПНН 13	Determine the tactics of emergency medical care assistance using the recommended algorithms, under any circumstances based diagnosis of an emergency condition in the conditions limited time	3K1 – 3K16, ФК1, ФК12, ФК15
ПНН 14	Analyze and evaluate state and social and medical information using standard approaches and computer information technology	3K1 – 3K6, 3K8, 3K10, 3K11, 3K13 – 3K16, ФК13, ФК15, ФК16
ПНН 15	Assess the impact of the environment on the state of health of the population in medical conditions institution according to standard methods	3K1 – 3K3, 3K5 – 3K7, 3K10, 3K11, 3K13 – 3K16, ФК13 – ФК16

**Learning outcomes in the emotional sphere**

ПНН 16	Form goals and define structure personal activity based on the result analysis of certain social and personal needs	3K1 – 3K16, ФК1, ФК5 – ФК14
ПНН 17	Follow a healthy lifestyle, use the techniques of self-regulation and self-control	3K1 – 3K3, 3K5, 3K6, 3K11 – 3K13, 3K15, 3K16, ФК5, ФК14
ПНН 18	Be aware and guided in your own civil rights activities, freedoms and responsibilities, to increase general cultural level	3K4 – 3K6, 3K10 – 3K16, ФК5, ФК13, ФК14, ФК16
ПНН 19	Adhere to the requirements of ethics, bioethics and deontology in their professional activities	3K1- 3K4, 3K9 – 3K13, 3K15, 3K16, ФК1, ФК5, ФК7, ФК9 – ФК16
ПНН 20	Organize the required level individual security (own and persons, about which cares) in case of typical dangerous situations in the individual field activities	3K1 – 3K3, 3K5, 3K9 – 3K16, ФК1, ФК5, ФК6, ФК9 – ФК15

**Learning outcomes in the psycho-emotional sphere**

ПНН 21	Perform medical manipulations on the base previous and / or final clinical diagnosis for different segments of the population and different conditions	3K1 – 3K3, 3K9 – 3K11, 3K13 – 3K15, ФК9 – ФК12
ПНН 22	Perform medical dental manipulation based on previous and / or final clinical diagnosis for various segments of the population and in different conditions	3K1, 3K2, 3K5, 3K6, 3K8 – 3K11, 3K13 – 3K15, ФК9 – ФК12



ПНП 23	Perform emergency manipulation medical care using standard schemes, under any circumstances on the basis of the diagnosis of an urgent condition (forlist 4) in a limited time	3K1 – 3K6, 3K8 – 3K11, 3K13 – 3K16, ФK9 – ФK12, ФK18
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**Learning outcomes for the discipline:** professional training of a dentist, which provides mastering the theory and practice of Prosthetic dentistry, the ability to conduct examination of an Prosthetic dental patient, to diagnose defects of the dental-maxillary areas of Prosthetic profile, justify and formulate a preliminary diagnosis, analyze the results of additional examinations and conduct differential diagnosis, to formulate the final diagnosis, to determine the principles of complex treatment, suggest different treatment options and anticipate possible complications.

**2. Information volume of the discipline of the individual profile course for choice: Prosthetic dentistry.**

7 ECTS credits amounting to 210 hours are allocated for the study of the academic discipline

**Content module "Prosthetic methods of treatment of diseases of the dental and maxillofacial apparatus"**

**Explain and interpret** modern theories of etiology and pathogenesis of pathological conditions of dental jaw system due to abnormalities in the development of the jaw bones, acquired in part and complete defects of teeth and dentitions, as well as defects and deformations of the maxillary facial area in adults, the elderly and senile.

**Master** the principles of diagnosis and Prosthetic treatment of basic dental diseases taking into account aesthetic, phonetic and functional disorders, individual features of the disease on the background of somatic pathology, when chronic diseases of the oral mucosa, with the phenomena of intolerance dentures for patients of different ages, including using methods dental implantation.

**Perform** preventive, diagnostic and Prosthetic treatments for dental pathology jaw system.

**Analyze** the results of basic and additional survey methods.

**To plan** the Prosthetic stage of complex treatment of patients with dental pathology systems.

**Topic №1 Prosthetic treatment of dental crown defects with veneers. Indications and clinical laboratory stages of veneer production. Materials for fixing veneers. Fixation techniques veneers. Diagnostic, clinical errors and complications in Prosthetic treatment patients with defects of crowns of teeth with veneers. Replacement of defects of hard tissues of teeth inlays. Indications, tab designs. Clinical and laboratory stages of manufacture.**

Examination of a patient with defects in the hard tissues of the teeth. Intra-syndromic differential diagnosis of destruction of tooth hard tissues. Clinical and special results (additional) research methods in patients with defects of hard tissues of teeth. Choice of tactics treatment of a patient with defects of hard tissues of teeth. Veneer manufacturing technologies and inlays in the treatment of patients. The choice of veneer design in different clinical situations. Tooth preparation for veneers. Obtaining working impressions. Prevention of complications aftertooth preparation. Fixation of veneers. Technologies of making inlays in the treatment of patients

**The list of questions that the student should study in class:**

- Classification of dental defects (Kurylenko, Black).
- Index of destruction of the occlusal surface of the tooth (Milikevich).
- Indications for making veneers.
- Requirements for veneers.
- Comparative characteristics of veneers made by different technologies.
- General principles of preparation of teeth for veneers.
- Preparation of teeth for veneers in different clinical situations.
- linear and laboratory stages of veneer prosthetics.



- CAD / CAM veneer production technology.
- Technology of veneer production on refractory models.
- Temporary prosthetic indications and methods.
- Press ceramics, injection molding.
- Fixation of veneers (adhesive fixing technique on composite cements).
- General principles of forming cavities for inlays.
- Formation of cavities of I, II, III, IV, V class according to Blak.
- Tab designs (inlay, online, overlay, reinlay).
- Clinical and laboratory stages of prosthetic prosthetics.
- Methods of making restorations using metal-free technologies.
- Indications and contraindications to the replacement of hard tissue defects with ceramic inlays technology of their manufacture.
- CAD / CAM restoration technology. Method on refractory models.
- International classification of inlays.
- Requirements and classification of inlays
- Tabbed impressions.
- Basic principles of forming cavities under inlays
- Classification of methods of making inlays
- Clinical and laboratory stages of production of crown inlays by direct method.
- Clinical and laboratory stages of production of coronal inlays by indirect method.
- Advantages and disadvantages of different methods of making inlays.
- Computer technology for making inlays.
- Materials for modeling and making inlays

**Topic №2 Restoration of teeth after endodontic treatment using pins individual production.**

**Diagnostic, clinical errors and complications Prosthetic treatment of patients with defects of tooth crowns with pins designs. Pin designs with use of standard pins. Treatment plan.**

**Designs, classifications, features of application of standard pins.**

Examination of the patient, interpretation of the results of clinical and special (additional) research methods with complete destruction of the crown of the tooth. Constructions pins of individual production in various clinical situations. Clinical and technological stages of individual production of pin structures. Standard (anchor) pins, their classification, indications for use.

Fiberglass and carbon standard pins: indications and technology of application.

Requirements for abutment teeth. Methods and materials for fixing standard pins structures. Tooth stump modeling based on standard pins.

***The list of questions that the student should study in class:***

- Etiology of complete destruction of the crown of the tooth.
- Indications and contraindications to the use of pin structures.
- Constructions of pin teeth, comparative characteristics of structural elements.
- Root requirements.
- Disadvantages of pin teeth.
- Classification of pin structures.
- Design features of pin teeth
- Indications and contraindications to the use of pin teeth.
- Assignment of separate structural elements of pin teeth. Benefits and disadvantages of pin designs.
- Evaluation of the effectiveness of various pin structures.
- Choice of pin design depending on the clinical situation.
- Conditions of application of pin designs.

- Modern requirements for pin constructions.
- Preparation, obtaining impressions for pin structures.
- Indications for the use of pin structures.
- Structural elements of pin dentures.
- Indications and clinical and laboratory stages of making pin teeth of different structures.
- Cast and collapsible cast stump inlays: manufacturing technology and indications for application.
- Basic principles of cavities formation under root-crown inlays.
- Materials used to make the inlays and the requirements that apply to them.
- What are pin teeth?
- Types of pin teeth.
- Indications for the use of pin teeth.
- Requirements for the root of the tooth and periodontium when prosthetics with pins teeth.
- Examination of the root, therapeutic preparation of the tooth root.
- Clinical and clinical-laboratory methods of manufacturing simplified structures pin teeth (according to Logan, Davis, Shiraka, Ilyina Markosyan, Parshin, Akhmedov).
- Indications for the manufacture of cult inlays with a pin. The advantages of this type prostheses.
- Requirements for the root and over the gingival part of the tooth, for postcore inlay.
- Clinical and laboratory stages of production of a cult pin tab direct and indirect (reverse) method.

**Topic №3 Jacket aesthetic crowns (porcelain, plastic, composite). Indication, clinic, laboratory stages of production. Clinical and laboratory stages of manufacture fixed prostheses on the frame of zirconium oxide. Marginal adaptation of restorations. Retraction of the gums. Methods of obtaining fingerimpressions. Temporary non-removable restorations. Indications for use. Manufacturing methods temporary restorations. Cements for temporary fixation of non-removable restorations.**

Jacket crowns are used to restore the anatomical shape and aesthetic properties of the tooth, as well as for temporary coating (plastic crowns) for a while manufacture of permanent prostheses and to restore physiological articulation jaw ratios. Jacket crowns restore the shape of the crowns of the teeth in which preserved pulp. Indications for the manufacture of jacket crowns. Contraindications to production of jacket crowns. Clinical and laboratory stages of porcelain manufacturing jacket crowns. Clinical and laboratory stages of manufacturing plastic jackets crowns. Clinical stages of making porcelain jacket crowns. Clinical stages production of plastic jacket crowns. Indications for making temporary crowns in different clinical situations. Tooth preparation under an artificial crown. Processing prepared tooth with various means of dentin protection. Getting anatomical impressions by various imprint materials silicone, alginate. Clinical technological stages of making temporary crowns. Prevention of complications after tooth preparation. Fixation and removal of the temporary crown.

***The list of questions that the student should study in class:***

- What is a jacket crown?
- General indications for the manufacture of jacket crowns.
- General contraindications to the manufacture of jacket crowns.
- Indications and contraindications to the manufacture of porcelain jacket crowns.
- Indications and contraindications to the manufacture of plastic jacket crowns.
- Clinical and laboratory stages of making porcelain jacket crowns.
- Clinical and laboratory stages of making plastic jacket crowns.
- Temporary prosthetic indications and methods.



- Indications for the manufacture of temporary crowns.
- imogas to temporary crowns.
- Comparative characteristics of different methods of making temporary crowns.
- Clinical and laboratory stages of making temporary crowns.
- Types of tooth preparation for artificial crowns.
- Influence of tooth preparation on the structure and function of the tooth.
- Possible complications of preparation and ways to prevent them.

**Topic №4 Replacement of dentition defects with metal-ceramic fixed dentures.**

Clinical and laboratory stages of manufacture. Fixed Prosthetic structures with zirconium-reinforced ceramics. Marginal adaptation of restorations. Methods of obtaining fingerimpressions. Indications for the manufacture of metal-ceramic structures. Methods, basic principles preparation of teeth under metal-ceramic crowns. Methods of retraction of the gingival margin. Receiving accurate impressions of silicone masses. Fitting of the finished structure, occlusion check. Materials for permanent fixing of metal-ceramic crowns. Classification of metal alloys and ceramic masses used for the manufacture of cermet structures. Difference ceramic masses for the manufacture of combined and all-ceramic structures. Basic requirements for alloys of metals and ceramic masses. The mechanism of connection of porcelain mass with metal. The sequence of application of ceramic masses, the process of sintering. Errors in manufacturing metal-ceramic structures, ways to prevent them. Metal-free ceramic systems are the latest achievements in modern dentistry. With the help of metal-free ceramics can be made crowns, inlays, veneers, providing excellent aesthetics. Currently, ceramics - the only one material that allows you to mimic the natural hard tissues of the tooth. Due to its extremely low corrosion coefficient, ceramics are biologically harmless, does not cause allergic reactions, allows to achieve a good functional and aesthetic result. Indications for the use of porcelain crowns. Clinical and laboratory stages of production porcelain crowns. Modern methods of making porcelain crowns. Choice of design porcelain crown depending on the clinical situation. Oblivosti dissection, removal impressions and fixation of porcelain crowns. Study of physicochemical properties of dioxide zirconium as a structural material for the manufacture of fixed prosthetic structures. Features of clinical and laboratory stages of manufacturing Prosthetic structures on the frame with zirconium dioxide.

***The list of questions that the student should study in class:***

- Indications and contraindications to the manufacture of metal-ceramic structures.
- Sequence and rules of tooth preparation. Choice of tools.
- Forms of ledges.
- Choice of gingival margin retraction method (mechanical, chemical, surgical and combined), depending on the clinical situation.
- Technology of obtaining an accurate print. The choice of impression masses.
- Fixation of the central occlusion by means of interocclusal impressions.
- Fitting and fixing of metal-ceramic crowns.
- Selection of cement for permanent fixation.
- Classification of metal alloys, precious and base metals, their advantages and shortcomings, clinical significance.
- The value of the coefficient of thermal expansion when choosing ceramic masses.
- Connection of ceramic mass with metal by means of mechanical retention, chemical interaction and compression stress
- Methods of surface preparation of the metal frame (surface grinding, heating at incomplete vacuum, acid pickling, heating in air)
- Stages of layer-by-layer application of ceramic masses, the process of their sintering.
- Evaluation of the finished metal-ceramic structure.
- Possible errors and complications at different stages of manufacture, ways to prevent them and

- elimination methods. Physico-chemical properties of the material
- Indications for the use of Prosthetic structures made of zirconium dioxide
- Contraindications to the use of Prosthetic structures made of zirconium dioxide
- Advantages of structures made of zirconium dioxide.
- Clinical stages of manufacturing Prosthetic structures from zirconium dioxide
- Laboratory stages of manufacturing Prosthetic structures from zirconium dioxide

**Topic №5. Theoretical foundations of biomechanics of the dental-maxillary system in normal and pathology. Fundamentals of gnathology. Articulatory relationships, Articulators, occluders, facial arch. Types, purposes, ways of plastering of models in an articulator**

Restoration and preservation of occlusion in restorative dentistry The main parts of the maxillofacial system and their function. Movements of the lower jaw.

Morphological and functional features of the occlusal surface. Factors that determine the relief of the occlusal surface. Fundamentals of occlusal diagnostics. Restoration and preservation of occlusion in restorative dentistry. Restoration of front teeth non-removable prostheses, taking into account the registration of the incisal path. Gnathological bases modeling of the occlusal surface. Restoration of occlusion with removable prostheses at complete loss of teeth on one or both jaws. Functional condition of the dental system in case of defects of hard tissues of teeth and partial loss of teeth. Hardware functional diagnostics. Articulators and their application for diagnosis, correction of occlusion disorders. Graphic methods examination. Intraoral registration of movements of the lower jaw.

***The list of questions that the student should study in class:***

- the main parts of the dental-maxillary system and their function;
- movements of the lower jaw;
- occlusal surface (morphological and functional features);
- Factors that determine the relief of the occlusal surface;
- Basics of occlusal diagnostics;
- Methods for determining the central ratio of the jaws;
- Evaluation of occlusion, occlusion, detection and characterization of supracontacts:
- functional analysis of the dental-maxillary system
- graphic research methods;
- Intraoral registration of mandibular movements;
- Extra-oral registration of mandibular movements (axiography);
- Methods for determining the central ratio of the jaws;
- Central ratio of jaws, central and "usual" occlusion;
- Central ratio and TMJ;
- Checking the correctness of determining the central ratio of the jaws;
- Restoration and preservation of occlusion in restorative dentistry

**Topic №6 Clinic of partial tooth loss. Features of diagnosis and basic provisions**

**Prosthetic treatment of patients with partial absence of teeth. Prosthetic treatment partial defects of the dentition. Classification of dentition defects. Substitution partial defects of the dentition with bridges. Clinical and laboratory stages manufacture of bridges. Galvanism, galvanosis. Replacement of dentition defects with partial removable prostheses. Features and methods of manufacturing partial removable prostheses from thermoplastics.**

Morpho-functional changes of the dental-maxillary system with partial tooth loss. Biomechanics chewing apparatus with partial defects of the dentition. Methods of determining the central occlusion and the central ratio of the jaws with partial loss of teeth. Violation of that occur in the dental system with partial secondary edentulism. Clinical signs of partial dentition defects in patients who require the manufacture of fixed dentures. Patient preparation planning for partial dental defects rows before prosthetics. Clinical and laboratory stages of manufacturing bridge



bridges. Mistakes and prevent complications of permanent prosthetics. Fixation of the bridge prosthesis.

Clinical signs of partial tooth loss in patients who require fabrication of partial removable prostheses. Examination of the patient with partial defects of the dentition. Results of clinical and special (additional) examination methods. Analysis of errors and prevention of complications of partial removable prosthetics. Evaluation of the prognosis of the patient's prosthetics with partial removable dentures.

***The list of questions that the student should study in class:***

- Analyze the causes of partial complete tooth loss.
- Explain the disorders that occur in the dental system with partial complete tooth loss
- Classify defects of dentitions, as well as alveolar processes and prosthetic mucosa
- Classifications of dentition defects.
- Characteristics of edentulous areas of alveolar processes.
- Classification of the mucous membrane of the prosthetic base.
- Causes of partial secondary edentulism.
- Explain the disorders that occur in the dental system with partial complete tooth loss
- Classification of dentition defects according to Kennedy.
- Classification of dentition defects according to Bethelman
- Classification of forms of edentulous areas of alveolar processes.
- Indications and contraindications to the replacement of dentition defects with fixed ones structures (bridge structures).
- Biomechanics of bridge prostheses.
- Requirements and selection of abutment teeth for fixed bridge structures.
- Preparation of abutment teeth for the manufacture of bridges.
- Temporary Prosthetic prostheses.
- Constructions of bridges.
- Indications and clinical and laboratory stages of manufacturing solid bridges prostheses, metal-ceramic bridges, adhesives.
- Errors and possible complications of fixed prosthetics.
- Galvanism and galvanosis.
- What is the essence of electrometric research, how and why it is conducted?
- How do potentiometric indicators change with different forms of intolerance?
- What changes occur in the hemogram of patients with this pathology?
- What factors determine the tactics of treatment?
- Indications and contraindications for the manufacture of various designs of partial removable prostheses.
- Biomechanics of partial removable prosthesis functioning.
- Distribution of chewing load during Prosthetic treatment with removable prostheses with different fixation systems.
- Redistribution of the masticatory load in the case of terminal and included defects of the tooth rows.
- Design features of various types of partial removable prostheses and methods of their fixation.
- Selection of supporting elements when planning the design of a partial removable prosthesis, preparation of supporting teeth, determination of the boundaries of the prosthesis.
- Stages of manufacturing a partial removable prosthesis.
- Materials and technological features of manufacturing partial removable prostheses.
- Features of obtaining impressions, making a working model and registration of central occlusion.

**Отформатировано:** Отступ Слева: 0,62 см, интервал после: 0 пт, междустрочный, одинарный, маркированный + Уровень: 1 + Выровнять по: 1,25 см + Отступ: 1,89 см

- Fitting and applying partial removable prostheses.
- Errors and complications in the restoration of dental defects with partial removable prostheses.

**Topic No. 7 Indications and contraindications for the replacement of partial defects of the dentition with clasp prostheses with a clasp system of fixation. The value of the number of supporting teeth and the topography of the defect.**

Planning of the frame of the brace prosthesis. Parallelometry - purpose and tasks. Methods of conducting parallelometry. Types of parallelometers. Manufacturing technology of a cast frame of a brace prosthesis on a fire-resistant model. Milling. Types of locking fasteners. The frame of the brace prosthesis. Indirect fasteners. Basics of brace prostheses.

**List of questions that the student should study in class:**

- Analyze the causes of partial secondary adentia
  - Disturbances that occur in the maxillofacial system with partial secondary adentia.
  - Classification of defects of dental rows, as well as alveolar processes and mucous membrane of the prosthetic bed.
  - Indications for the manufacture of brace prostheses.
  - Contraindications to the manufacture of brace prostheses.
  - Constituent parts of brace prostheses.
  - Definition of "Bügel prosthesis" history of appearance.
  - Classification of byugelnyz prostheses according to the method of manufacture and methods of fixation.
  - Ney's clasp system.
  - Purpose and methods of conducting parallelometry.
  - Types of stabilization of brace prostheses.
  - Keepers.
  - Requirements for the shape, size and placement of the arches of the brace prostheses on the lower and upper jaws.
  - The method of preparing the working model for duplication and the duplication process itself.
  - Comparative characteristics of methods of casting the frame of the brace prosthesis on a refractory model and without it.
  - Classification and components of staples.
- ~~Topic №9 Replacement of dentition defects with partial removable dentures. Features and methods of manufacturing partial removable prostheses from thermoplasts. Clinical signs of partial tooth loss in patients in need of fabrication partial removable dentures. Examination of the patient with partial defects of the dentition. Results of clinical and special (additional) examination methods. Error analysis and prevention of complications of partial removable prosthetics. Forecast assessment prosthetics of the patient with partial removable dentures.~~

**Отформатировано:** интервал после: 0 пт, Не добавлять интервал между абзацами одного стиля, между строчный, одинарный

**Topic №8 Indications for the replacement of partial defects of the dentition with dentures with mechanical fasteners. Designs, features of use. Fixation methods: lock, beam, telescopic. Rehabilitation of patients with single teeth. Covering dentures: design features, fixation methods, selection and requirements for abutment teeth. Post-prosthetic support.**

Indications for the replacement of partial defects of the dentition with dentures with locks. Classification of attachments and sequence of clinical stages of production of prostheses with locks clamps. Psychological state of a patient with preserved single teeth. Expediency and the need to preserve single teeth. Prosthetics of patients from one preserved teeth as a preparatory and adaptive stage before full prosthetics removable dentures. Methods of fixation of integumentary prostheses.

***The list of questions that the student should study in class:***

- Definition of the term "Lock Fastening (attachment)"
- Advantages and disadvantages of LC, indications for use and contraindications.
- Classification of LC (attachment).



- Procedure for selection of LC.
- Sequence of clinical stages of prosthesis manufacturing with lock clamps
- Locking functions
- Indications for the use of locking fasteners
- Advantages and disadvantages of locking fasteners
- Precision locking fasteners
- Semi-precision locks
- Activating LC
- Non-activating LC
- The order of selection of lock fastenings
- Types of LC constructions
- Functionalities of lock fastening
- The mechanism of connection of a matrix and a patrix
- Sequence of clinical stages of prosthesis manufacturing with lock clamps
- Requirements for single teeth or roots.
- Features and significance of the location of single teeth or roots.
- Therapeutic preparation of single teeth or roots for prosthetics.
- Types of fixing elements for dentures.
- Ball clamps of integumentary prostheses.
- Beam fastenings of cover prostheses.
- Telescopic crowns for prosthetics with cover prostheses.
- Post-prosthetic patient management.
- Rules for using cover prostheses.
- Dependence of the choice of fixing elements on the number, condition, location in horizontal and vertical planes of single teeth or roots.

**Topic №9 Complete removable prosthetics. Clinic, design features at adverse clinical conditions in the upper and lower jaws. Errors and complications in the Prosthetic treatment of various pathologies of the dental system. The effect of dentures on the human body. Allergic conditions in Prosthetic dentistry. Differential diagnosis, prevention, clinic and treatment.**

Anatomical and topographic features of the structure of edentulous jaws. Morpho-functional changes that take place in patients with complete loss of teeth. Classification of edentulous jaws. Clinical laboratory stages of manufacturing complete removable prostheses. Features of the definition of the central occlusions in edentulous jaws. Methods of fixation and stabilization of prostheses. Terms of use and care for complete removable dentures. Acquaintance with clinical manifestations of the syndrome intolerance of metal alloys of dentures. Etiological factors leading to development of the syndrome of intolerance of metal alloys of dentures. Definition of "causal" prosthesis and planning a sequence of actions to eliminate negative phenomena. Installation diagnosis when examining patients with intolerance syndrome. Differentiation of different forms of this syndrome.

***A list of questions that the student should study in class***

- Examination of patients with complete loss of teeth
- Senile progeny.
- Oxman's classification of edentulous jaws.
- Schroeder's classification of edentulous upper jaws.
- Classification of the lower edentulous jaws according to Keller.
- Taking a complete anatomical impression of the edentulous jaws
- Making, fitting an individual spoon
- Taking a functional imprint
- Functional tests according to Herbst
- Production of wax bases with biting rollers

- Methods for determining the height of the bite
- Methods of fixation of central occlusion
- Methods of placing artificial teeth on a wax base
- Fixation, stabilization and balance of complete removable plastic prostheses
- Checking the design of a complete removable prosthesis
- Methods of replacing wax with plastic
- Fixation of a complete removable prosthesis
- Rules of use and care of the prosthesis.
- Adaptation to a complete removable prosthesis
- Injury of the mucous membrane of the gums, cheeks, organisms of the oral cavity during tooth preparation.
- Insufficient grinding of hard tissues.
- traumatic pulpitis.
- Mismatch of the shape and size of the crown to the prepared tooth and prosthesis
- Mechanical action of basic materials on prosthetic bed tissues.
- Toxic effect of base materials
- Manifestations of allergic reaction to basic materials.
- Causes of stomatitis
- Influence of removable prosthetic structures on prosthetic field tissues.
- Occurrence of traumatic prosthetic stomatitis
- Types of complications that occur during the stages of manufacturing non-removable bridges prostheses, their causes, methods of elimination.
- Clinic of overload of abutment teeth.
- Reserve forces of periodontium.
- Prevention of overload of abutment teeth.
- Phenomena of galvanosis in the oral cavity when using fixed bridges prostheses, clinic, differential diagnosis, prevention.
- Allergic manifestations in the oral cavity when using different types of bridges prostheses, clinic, diagnosis, prevention.
- Traumatic periodontitis when using fixed bridges.
- Complications that occur during the manufacture of various types of removable dentures, prevention and elimination methods.
- Complications when using removable dentures. Classification, differential diagnosis.
- Influence of removable prostheses on the tissues of the prosthetic bed and the body as a whole.
- Prosthetic stomatitis, definition, classification.
- Allergic stomatitis, clinic, differential diagnosis, treatment.
- Toxic stomatitis, clinic, differential diagnosis, treatment.
- Traumatic stomatitis, clinic, differential diagnosis, treatment.
- Symptom complex of intolerance of metal alloys of dentures.
- Forms of symptom complex of intolerance.
- Differential diagnostic criteria for various forms of intolerance.

**Topic №10 Examination of patients with periodontal diseases. Analysis of odonto-periodontograms. Diagnosis, planning of interventions in complex treatment. Tasks Prosthetic intervention in the complex treatment and prevention of tissue diseases periodontium. Traumatic occlusion. Etiology, pathogenesis. Diagnosis. Treatment. Prevention. Classifications Periodontal tissue diseases. Functional pathology dental system. The purpose and objectives of Prosthetic treatment. Permanent splinting in periodontal disease.**

Clinical picture in periodontal diseases. Differential diagnosis periodontal disease. Primary traumatic node, definition. Primary traumatic occlusion, definition. Clinical signs of primary



traumatic occlusion. Functional overload, Etiology, prevention, clinical picture. Clinical manifestations traumatic occlusion with partial loss of teeth. Selective grinding of teeth. Tasks Prosthetic treatment. Types of splinting. Indications for the use of different types of tires. Prosthetic treatment of periodontal tissue diseases with fixed structures. Prosthetic treatment of periodontal diseases with removable structures. Features prosthetics of partial defects of dentitions at periodontal diseases.

***A list of questions that the student should study in class***

- Anatomical and physiological characteristics of the masticatory apparatus in diseases of periodontitis and periodontitis.
- Classification of periodontal tissue diseases (1999).
- Examination of a patient with periodontitis and periodontitis. WITH the beginning of X-ray inspection at establishment of the final diagnosis.
- Analysis of the functional state of the dental apparatus in periodontitis and periodontitis.
- Indications for removal of movable teeth.
- Courland's odontoparodontogram: the concept of functional pathology; reserve and residual capacity of the periodontium.
- Types of dentition stabilization.
- Biomechanical bases of dental splinting.
- Tasks of Prosthetic interventions in the complex treatment of diseases periodontium.
- Preliminary preparation of dentitions before prosthetics.
- Temporary splinting.
- Etiology, diagnosis, clinic and Prosthetic methods of localized treatment periodontitis.
- Removable and non-removable structures of dentures in complex treatment localized periodontitis.
- Etiology, diagnosis, clinic and Prosthetic methods of generalized treatment periodontitis and periodontitis. Removable and non-removable designs of dentures.
- Indications and clinical and technological stages of manufacturing non-removable solid castings splints and splint prostheses.
- Direct prosthetics.
- Indications, clinical and technological stages of production and use of immediate prostheses.
- Errors and complications in the treatment of patients with periodontitis and periodontitis.
- Treatment prognosis

**Topic №.11 Excessive abrasion of the hard tissues of the teeth. Etiology, pathogenesis. Clinical forms. Diagnosis. Classification. Prosthetic methods of treatment and prevention excessive abrasion. Tooth-jaw deformations. Mechanisms of occurrence. Clinical forms. Principles comprehensive examination and treatment.**

"Physiological abrasion of teeth". "Pathological abrasion of teeth". Classification of pathological abrasion of teeth. Etiology, pathogenesis and clinical manifestations of pathological abrasion of teeth. Principles and tasks of Prosthetic treatment of pathological abrasion of teeth Prosthetic treatment pathological abrasion. Planning Prosthetic treatment of pathological abrasion in depending on the clinical manifestations of intact dentition and partial absence of teeth. Diagnosis and substantiation of tactics of treatment of the generalized form of the increased abrasion teeth of III degree of severity with a decrease in the height of the lower part of the face. Examination plan of a patient with pathological abrasion of teeth. Interpretation of results clinical and additional research methods of the patient with pathological abrasion of the hard tissues of the teeth. Determination of etiological and pathogenetic factors of pathological abrasion of teeth. Rationale and formulation of the syndrome diagnosis. Carrying out of intra-syndrome diagnostics, substantiation and formulation of a preliminary clinical diagnosis in pathological abrasion of teeth.

Determining the tactics of the patient with pathological abrasion of teeth. Treatment general principles of treatment, rehabilitation, prevention of pathological abrasion of teeth. Detection of the main syndromes in the clinic of Prosthetic dentistry and carrying out intrasyndrome differential diagnosis at change of interalveolar altitude. Examination of a patient with dental-maxillary deformities. Interpretation results of clinical and additional research methods of the patient with maxillary deformities. Determination of etiological and pathogenetic factors dental deformities. Substantiation and formulation of the syndrome diagnosis. Application of general principles of treatment, rehabilitation, prevention of dental deformations. Drawing up a treatment plan for the patient. Interpretation of the radiograph with dental deformities.

***A list of questions that the student should study in class***

- Etiology and pathogenesis of pathological abrasion of hard tissues of teeth.
- Morphological features and microelement composition of enamel and dentin of human teeth normal and with their pathological abrasion.
- Clinical manifestations of pathological abrasion of teeth.
- Classifications of pathological abrasion of teeth (Grozovsky, Courland, Gavrilov, Bushana).
- Diagnosis of pathological abrasion of teeth and its complications.
- Diagnosis of pathological abrasion of the hard tissues of the teeth.
- Complications of pathological abrasion of teeth, which accompanied by a decrease in interalveolar height and thyroid dysfunction.
- Prosthetic treatment of pathological abrasion of hard tissues teeth depending on clinical forms and complications.
- Treatment of pathological abrasion of hard tissues of teeth of the I degree.
- Treatment of pathological abrasion of hard tissues of teeth II - III degree.
- Etiology and pathogenesis of pathological abrasion of teeth.
- Classification of pathological abrasion of teeth.
- Clinical and special methods of examination in pathological abrasion of hard tissues teeth.
- X-ray research methods.
- Analysis of diagnostic models.
- Clinical manifestations of pathological abrasion of the hard tissues of the teeth
- Symptoms and syndromes of pathological abrasion of teeth.
- Decrease in bite height at pathological attrition, its consequences.
- Features of Prosthetic treatment.
- Prevention of complications of pathological abrasion of teeth
- Mata and stages of Prosthetic elimination of pathological abrasion.
- Methods of Prosthetic and complex treatment of pathological abrasion of teeth at intact dentition.
- Methods of Prosthetic and complex treatment of pathological abrasion of teeth at partial tooth loss.
- Clinical use of medical-diagnostic cap.
- Methods and sequence of normalization of the height of the lower part of the face.
- Errors and complications in the Prosthetic treatment of pathological abrasion teeth.
- Partial absence of teeth, which is complicated by deformation of the dentition; morphological and functional changes of the dental apparatus.
- Mechanisms of formation of dental deformities.
- Morphological changes of dental and surrounding dental tissues in dental deformations.
- Clinical forms of deformities caused by partial absence of teeth.
- Pathogenesis of vertical and horizontal deformations of the dentition.
- Preparation of the dental system for prosthetics in the presence of dental deformations (prosthetic, surgical, orthodontic).

- Indications and justification for the removal of individual teeth.

**Topic №12 Functional anatomy of TMJ. Examination of patients with TMJ pathology. Etiology and pathogenesis of TMJ diseases. Differential diagnosis. Orthopedic methods of treatment of TMJ diseases. Temporomandibular joint disease. Etiology, clinic, differential**

In the vast majority of cases, except for trauma, acute infectious-allergic process and systemic diseases, all pathological conditions of the TMJ (arthritis, osteoarthritis, ankylosis) undergo a stage of functional pathology. In cases where joint tissue is affected significant morphological changes conservative treatment, which is the competence of dentists-orthopedists ineffective and insufficient. But at the stage of functional pathology is timely diagnosis and properly selected Prosthetic treatment are necessary and effective. Etiology, pathogenesis of diseases of the temporomandibular joint (TMJ). Clinical examination, differential diagnosis. Methods of Prosthetic treatment.

Examination of the patient with diseases (dysfunctions) of the temporomandibular joint. Analysis of the results of clinical and special (additional) research methods TMJ. Carrying out of differential diagnostics, formulation of preliminary clinical diagnosis of TMJ diseases. Planning of measures for disease prevention (dysfunction) of the TMJ.

***The list of questions that the student should study in class:***

- Anatomy of the temporomandibular joint (TMJ).
- Muscles that provide movement in the TMJ.
- General clinical methods of TMJ research. Examination, history taking
- Analysis of mandibular movements.
- Analysis of joint noise.
- Palpation of the joint and masticatory muscles.
- Assessment of occlusion and occlusal contacts.
- Petrosov functional tests.
- Additional methods of TMJ research.
- Rheoarthrography.
- Phonoarthrography.
- Electromyography.
- Intraoral registration of mandibular movements.
- Function diagram of the main movements of the mandible (coincidence (a)
- X-ray research methods.
- Tomography and computed tomography.
- Etiology and pathogenesis of TMJ diseases.
- Classification of TMJ diseases.
- Dysfunctional conditions of the TMJ.
- Neuromuscular dysfunctional syndrome
- Occlusion-articulation syndrome 1.3 habitual dislocations in the joint (jaw, disc)
- Arthritis. Acute infectious (specific, nonspecific), acute traumatic, chronic rheumatic, rheumatoid and infectious-allergic)
- Osteoarthritis (Post-infectious (nearthrosis), post-traumatic (deforming), osteoarthritis myogenic osteoarthritis, metabolic arthrosis, ankylosis (fibrous and skeletal)
- Combined forms
- Neoplasms (benign and malignant) and dysplastic (tumor-like) processes.
- Prosthetic methods of treatment of TMJ diseases.
- Centering (repositioning) buses.
- Disconnecting tires.
- Etiology and pathogenesis of TMJ dysfunctions.
- Leading clinical symptoms and syndromes in TMJ dysfunction (occlusal



articulation syndrome, neuromuscular syndrome, habitual subluxation, dislocation, stable functional displacement of the mandible, occlusion, which decreases).

- Types of displacement of articular heads (hypermobility, dislocation, subluxation).
- Types of displacement of the articular disc (subluxation, dislocation, prolapse).
- Clinical signs of dysfunctional conditions.
- Helkimo dysfunction index.
- Data of clinical and special (additional) methods for different clinical variants course and complications.
- Intra-syndrome differential diagnosis.
- Preliminary diagnosis.
- Tactics of managing a patient with TMJ dysfunction.
- Methods of Prosthetic treatment.
- Caps, their classification, indications for use.
- Prevention of TMJ dysfunctions.

**Topic No. 13 Basics of dental implantation. Peculiarities of examination. Indications for implantation. Implantation planning. Component parts of the implant. Methods of connecting the abutment to the implant. Abutments, types, indications for use. Clinical and technological stages of manufacturing fixed dentures with support on implants.**

Peculiarities of diagnosis and examination of patients when planning treatment with the use of implants. Indications and contraindications for prosthesis on implants. Conducting clinical and radiological assessment of the clinical situation. Types, structure and microstructure of implants. Types of abutments. Technological features of connecting the abutment with the implant. Types of gum formers. Types of structures of prostheses with support on implants. Clinical and technological stages of prosthetics on implants. Implantation success criteria. Sequence of clinical stages of prosthetics on implants. Sequence of laboratory stages of prosthetics on implants. Indications for various methods of obtaining impressions. Errors and complications of dental implantation in the Prosthetic stages of treatment.

***List of questions that the student should study in class:***

- Type of edentulism.
- Method of prosthetics.
- Bone volume.
- Type of bone architecture.
- Development of a treatment plan.
- Temporary and transitional prosthetics.
- Biomechanics of prosthetics on implants.
- Concept of integration, its types.
- Planning the design of the dental prosthesis.
- Designs of dental implants.
- Designs of abutments.
- Shock absorbers.
- Typical sizes of implants.
- Equipment and tools.
- Equipment. Instrumental support of the dental laboratory.
- Indications for the use of various types of abutments.
- Advantages and disadvantages of various abutment-implant connections.
- Types of gum formers, their choice depending on the biotype of the gums.
- Planning the design of a dental prosthesis depending on clinical conditions and the use of different types of abutments
- Permanent prosthetics using dental implants.
- Indications and necessary conditions for permanent prosthetics using dental implants.
- Peculiarities of clinical and laboratory stages.
- Conditionally removable prosthetics using dental implants.

- Indications and necessary conditions for conditionally removable prosthetics using dental implants.
- Peculiarities of clinical and laboratory stages.
- Features of fingerprint removal.
- The method of making an individual "open spoon".
- Methods of modeling frames of conditionally removable structures.
- Advantages and disadvantages of conditionally removable structures.
- Closed spoon impression removal technique.
- Indirect transfer transfer method.
- Open spoon impression removal technique.
- Direct transfer transfer method.
- Methods of obtaining a print.
- Impression from the prepared abutment, impression at the level of the implant and at the level of the abutment.
- Removable prosthetics using dental implants.
- Indications and necessary conditions for removable prosthetics using dental implants.
- Peculiarities of clinical and laboratory stages.
- Advantages and disadvantages of removable structures.
- Principles of occlusion formation during prosthetics on implants, features of partial and complete adentia.
- Errors and complications of dental implantation at the Prosthetic stage of patient treatment and after treatment. Causes and prevention.
- A complex of hygienic measures during prosthetics on implants.

### 3. The structure of the academic discipline

Content module " Prosthetic methods of dentomaxillary diseases treatment "				
№	Theme	lecture	Practice	Wed.
1	Prosthetic treatment of defects of dental crowns veneers. Indications and clinical and laboratory stages making veneers. Materials for fixing veneers. Veneer fixation techniques. Diagnostic, clinical errors and complications in the Prosthetic treatment of patients with defects of tooth crowns with veneers. Replacement of defects of hard tissues of teeth by inlays. Indications, tab designs. Clinical and laboratory stages of manufacture.		6	7
2	Restoration of teeth after endodontic treatment with using individually made pins. Diagnostic, clinical errors and complications Prosthetic treatment of patients with crown defects teeth pin designs. Pin designs using standard pins. Treatment plan. Constructions, classifications, features of application of standard pins		6	
3	Jacket aesthetic crowns / porcelain, plastic, composite. Indications, clinic, laboratory stages production. Clinical and laboratory stages of manufacture fixed prostheses on the frame of zirconium oxide. Marginal adaptation of restorations. Retraction of the gums. Methods of obtaining fingerimpressions Temporary non-removable restorations. Indications to application. Methods of making temporary restorations. Cements for temporary fixing permanent restorations.		6	7
4	Replacement of dentition defects with metal-ceramic fixed dentures. Clinical and laboratory stages of manufacture. Fixed Prosthetic constructions from reinforced zirconium dioxide ceramics. Marginal		6	7

	adaptation restorations. Retraction of the gums. Methods of obtaining impressions			
5	Theoretical foundations of biomechanics of the dental-maxillary system normal and in pathology. Recovery and preservation occlusions in restorative dentistry. Fundamentals of gnathology. Articulatory relationship. Articulators, occluders, facial arch. See, purpose, methods of plastering models in articulator			7
6	Clinic of partial tooth loss. Features of diagnostics and the main provisions of Prosthetic treatment of patients with partial absence of teeth. Prosthetic treatment partial defects of the dentition. Classification of defects dentition. Replacement of partial defects of dentitions bridge prostheses. Clinical and laboratory stages manufacture of bridges. Galvanism, galvanosis. Replacement of dentition defects with partial removable prostheses. Features and methods of manufacture partial removable dentures made of thermoplastics		6	
7	Indications and contraindications to partial replacement defects of dentitions by clasp prostheses with staple fixing system. The value of quantity abutment teeth and defect topography.		6	7
8	Indications for replacement of partial dental defects rows of prostheses with mechanical fasteners. Designs, features of use. Methods fixations: lock, beam, telescopic. Rehabilitation of patients with single teeth. Covering prostheses: design features, fixation methods, selection and requirements for abutment teeth. Post-prosthetic support		6	7
9	Complete removable prosthetics. Clinic, features design under adverse clinical conditions on upper and lower jaws. Errors and complications in Prosthetic treatment various pathologies of the dental-maxillary system. Influence dentures on the human body. Allergic conditions in Prosthetic dentistry. Differential diagnosis, prevention, clinic and treatment.		6	7
10	Periodontal tissue disease. Functional pathology of the dental system. Purpose and objectives Prosthetic treatment. Permanent splinting at periodontal tissue disease.		6	7
11	Excessive abrasion of the hard tissues of the teeth. Etiology, pathogenesis, clinical forms. Prosthetic interventions. Tooth and jaw deformities. Mechanisms of occurrence. Clinical forms. Principles of comprehensive examination and treatment.		6	7
12	Functional anatomy of TMJ. Examination of patients with TMJ pathology. Etiology and pathogenesis of TMJ diseases. Differential diagnosis. Orthopedic methods of treatment of TMJ diseases.			7
13	Temporomandibular joint disease. Etiology, clinic, differential diagnosis of TMJ diseases. Treatment of TMJ dysfunction. Occlusion correction. Preliminary and final design		6	7



14	Basics of dental implantation. Peculiarities of examination. Indications for implantation. Implantation planning. Component parts of the implant. Methods of connecting the abutment to the implant. Abutments, types, indications for use		6	7
15	Clinical and technological stages of manufacturing fixed prostheses with support on implants		6	6
<b>Together</b>		<b>0</b>	<b>78</b>	<b>72</b>

#### 4. THEMATIC PLAN OF LECTURES

Not provided

#### 5. THEMATIC PLAN OF PRACTICAL LESSONS for the 5th year of study Content module "Prosthetic methods of dentomaxillary diseases treatment "

№	Topic	Hours
1	Prosthetic treatment of defects of dental crowns with veneers. Indications and clinical and laboratory stages of veneer production. Fixing materials veneers. Veneer fixation techniques. Diagnostic, clinical errors and complications in Prosthetic treatment of patients with defects of dental crowns veneers. Replacement of defects of hard tissues of teeth by inlays. Indications, constructions inlays. Clinical and laboratory stages of manufacture.	6
2	Restoration of teeth after endodontic treatment using pins of individual production. Diagnostic, clinical errors and complications in the Prosthetic treatment of patients with crown defects teeth pin designs. Pin designs using standard pins. Plan treatment. Designs, classifications, features of application of standard pins	6
3	Jacket aesthetic crowns / porcelain, plastic, composite. Indications, clinic, laboratory stages of manufacture. Clinical and laboratory stages of manufacturing fixed prostheses on a frame of zirconium oxide. Marginal adaptation of restorations. Retraction of the gums. Methods of obtaining impressions	6
4	Replacement of dentition defects with metal-ceramic fixed dentures. Clinical and laboratory stages of manufacture. Fixed Prosthetic constructions from reinforced zirconium dioxide ceramics. Marginal adaptation restorations. Retraction of the gums. Methods of obtaining impressions	6
5	Theoretical foundations of biomechanics of the dental-maxillary system normal and in pathology. Recovery and preservation occlusions in restorative dentistry. Fundamentals of gnathology. Articulatory relationships, Articulators, occluders, facial arch. See, purpose, methods of plastering models in articulator.	6
6	Clinic of partial tooth loss. Features of diagnostics and the main provisions of Prosthetic treatment of patients with partial absence of teeth. Prosthetic treatment partial defects of the dentition. Classification of defects dentition. Replacement of partial defects of dentitions bridge prostheses. Clinical and laboratory stages manufacture of bridges. Galvanism, galvanosis. Replacement of dentition defects with partial removable prostheses. Features and methods of manufacture partial removable dentures made of thermoplastics.	6
7	Indications and contraindications to partial replacement defects of dentitions by clasp prostheses with staple fixing system. The value of quantity abutment teeth and defect topography.	6

8	Indications for replacement of partial dental defects rows of prostheses with mechanical fasteners. Designs, features of use. Methods fixations: lock, beam, telescopic. Rehabilitation of patients with single teeth. Covering prostheses: design features, fixation methods, selection and requirements for abutment teeth. Post-prosthetic support	6
9	Complete removable prosthetics. Clinic, features design under adverse clinical conditions on upper and lower jaws. Errors and complications in Prosthetic treatment various pathologies of the dental-maxillary system. Influence dentures on the human body. Allergic conditions in Prosthetic dentistry. Differential diagnosis, prevention, clinic and treatment.	6
10	Periodontal tissue disease. Functional pathology of the dental system. Purpose and objectives Prosthetic treatment. Permanent splinting at periodontal tissue disease.	6
11	Excessive abrasion of the hard tissues of the teeth. Etiology, pathogenesis, clinical forms. Prosthetic interventions. Tooth and jaw deformities. Mechanisms of occurrence. Clinical forms. Principles of comprehensive examination and treatment	6
12	Functional anatomy of TMJ. Examination of patients with TMJ pathology. Etiology and pathogenesis of TMJ diseases. Differential diagnosis. Orthopedic methods of treatment of TMJ diseases. Temporomandibular joint disease. Etiology, clinic, differential diagnosis of TMJ diseases. Treatment of TMJ dysfunction. Occlusion correction. Preliminary and final design	6
13	Basics of dental implantation. Peculiarities of examination. Indications for implantation. Implantation planning. Component parts of the implant. Methods of connecting the abutment to the implant. Abutments, types, indications for use. Clinical and technological stages of manufacturing fixed prostheses with support on implants	6
<b>Total hours:</b>		<b>78</b>

**Thematic plan of independent work of students for 5 years of study**

**Content module**

**" Prosthetic methods of dentomaxillary diseases treatment "**

<b>№</b>	<b>Topic</b>	<b>hours</b>	<b>type of control</b>
1	Modern methods of examination in Prosthetic dentistry. Issues of asepsis and antiseptics.	6	Current control in practice classes
2	Psychoemotional and stress reactions in patients with dental reception. The mechanism of pain.	6	Current control in practice classes
3	Aesthetics in fixed dentures 7 Current control in practice classes	6	Current control in practice classes
4	Bone biology. Fundamentals of reparative osteogenesis. The reaction of bone tissue to functional load.	6	Current control in practice classes
5	Ethics and deontology in the doctor-patient relationship Prosthetic dentistry.	6	Current control in practice classes
6	Organizational and legal support of the provision dental care. Legal responsibility in dentistry	6	Current control in practice classes
7	Reflexes of the masticatory system. Chewing link.	6	Current control in practice classes
8	Problems of phonetics in Prosthetic treatment patients with complete loss of teeth.	6	Current control in practice classes

9	Characteristics of mandibular movements and their connection with methods of artificial teeth during prosthetics complete removable plate prostheses.	6	Current control in practice classes
10	Basic principles of an integrated approach to treatment periodontal pathology.	6	Current control in practice classes
11	Possible errors in the stages of making complete removable prostheses, which cause their poor fixation.	4	Current control in practice classes
12	Writing and defending a medical history	4	Current control in practice classes
13	Dental implantation - history of development	4	Current control in practice classes
<b>Total hours:</b>		<b>72</b>	

**7. Individual tasks** (disease histories, forensic medical reports, toxicological research reports, course and diploma theses, master's theses) are not provided.

#### **8. Teaching methods.**

The educational process at the Department of Orthopedic Dentistry is organized according to the following normative documents:

- Law of Ukraine "On Higher Education" dated July 1, 2014 No. 1556-VII;
- Resolutions of the Cabinet of Ministers of Ukraine dated April 29, 2015 No. 266 "On approval of the list of fields of knowledge and specialties for which higher education applicants are trained - order of the Ministry of Education and Culture of Ukraine No. 1151 dated November 6, 2015 "On the specifics of the introduction of the list of fields of knowledge and specialties for which higher education applicants are trained, approved by Resolution No. 266 of the Cabinet of Ministers of Ukraine dated April 29, 2015"
- the order of the rector of Danylo Halytskyi LNMU dated June 2, 2016 No. 1604 "On approval of educational plans"
- regulations on the organization of the educational process at the Lviv National Medical University named after Danylo Halytskyi 02.18.2015 protocol No. 1-BP.

#### ***Methods of organizing the educational process in a practical lesson in Prosthetics dentistry:***

##### **Organization of practical classes:**

**-preparatory stage (20 min.)** Justification by the teacher of the importance of the topic of the lesson for the future study of discipline and professional activity of a doctor in order to form motivation and purposeful educational activities. Introducing students to specific goals and lesson plan. Carrying out standardized control of the initial level of training students. Discussion and answers to students' questions.

**-main stage (40 min.)** Performance by students of practical skills in the discipline "Propaedeutics of Prosthetic dentistry (algorithm for examining a patient on a phantom, kneading of impression materials, selection of impression spoons, taking of impressions, casting models of jaws, fixing of models in an articulator, acquisition of bases of preparation of phantoms teeth under fixed Prosthetic structures).

**-final stage (30 min.)** Carrying out a standardized final control with using individual test tasks in the MISA learning environment, and questions analysis of results. Evaluation by the teacher of the current activity of the student during the lesson, analysis of student performance, announcement of grades and their entry in the paper and electronic versions of the journal of records of visits and student performance. Group leader makes assessments in the statement of performance and attendance of students with the following certified by the teacher. Informing students about the topic of the next lesson and methodical measures to prepare for it.



Practical classes are provided with appropriate methodological and illustrative materials. Classes are conducted using test tasks, situational control tasks, oral answers, demonstration materials, phantoms of teeth, phantoms of the patient's head.

Types of educational activities of students according to the curriculum are: practical classes and independent work of students (VTS).

The topics of the lecture course reveal the problematic issues of the relevant sections Prosthetic dentistry.

Practical classes according to the method of their organization are clinical, and include:

- 1) examination of patients in the clinical office using the dental equipment and tools;
- 2) analysis of diagnostic models of patients with different types of pathology dental-maxillary apparatus, choice of methods of restoration of defects of teeth and dentitions;
- 3) development by students of practical skills during clinical reception thematic patients,
- 4) solving situational problems (evaluation of diagnostic models, occludograms, data) X-ray examination, etc. ), having a clinical focus, as well as solving test situational problems (format A).

Students in practical classes, during the clinical admission of patients fill out medical card of the examined patient, and it is recommended to fill in another report documentation (doctor's diary, outfits for dental work).

#### **9. Control methods**

Current control is carried out in the form of an oral survey and a written test control.

The form of final control - in accordance with the curriculum - semester credit in the form of an oral examination and a written test or

Evaluation criteria: control measures include current and final semester CONTROL.

**10. Current control** is carried out during training sessions and aims

checking the assimilation of educational material by students. Forms of current assessment educational activities include control of theoretical and practical training.

During the assessment of mastering each topic for the current educational activities of the student grades are given on the 4th point (excellent, good, satisfactory, unsatisfactory). With all types of work provided by the program of discipline are considered. The student must receive score on each topic for further conversion of scores into multi-point scores (200-score) scale.

The grade "**excellent**" is given in the case when the student knows the program in full volume, illustrating the answers with various examples; gives comprehensively accurate and clear answers without any leading questions; teaches material without errors, inaccuracies; freely decides tasks and performs practical tasks of varying complexity;

A grade of "**good**" is given if the student knows the whole program and understands it well her, answers the questions correctly, consistently and systematically, but they are not exhaustive, although the student answers additional questions without errors; solves all problems and performs practical tasks experiencing difficulties only in the most difficult cases;

A grade of "**satisfactory**" is given to a student based on his knowledge of the entire program on the subject and a satisfactory level of understanding. The student is able to solve the modified tasks with leading questions; solves problems and performs practical skills, experiencing difficulties in simple cases; unable to systematically set out on their own the answer, but answers the direct questions correctly.

The grade "unsatisfactory" is given in cases when the student's knowledge and skills are not meet the requirements of "satisfactory" assessment.

#### **11. Form of final control of academic success (credit).**

Semester test is a form of final control, which consists in assessing the mastery student of educational material solely on the basis of the results of his performance of certain types of work in practical, seminar or laboratory classes. Semester test with disciplines is held after the end of its study, before the examination session.

**12. Scheme of accrual and distribution of points received by students:**

The maximum number of points that a student can score for the current academic activity at the study of the discipline is 200 points.

The minimum number of points that a student must score for the current academic activity for enrollment in the discipline is 120 points.

The calculation of the number of points is based on the student's grades for 4 point (national) scale during the study of the discipline, by calculating the average arithmetic (CA), rounded to two decimal places. The resulting value is converted into points on a multi-point scale as follows:

**For convenience, the table of recalculation on a 200-point scale is given:**

**Recalculation of the average score for current activities in a multi-point scale for disciplines that end with a test**

4-ball scale	200-ball scale	4-ball scale	200-ball scale	4-ball scale	200-ball scale
5	4.17	200	167	3.32	134
4.97	4.14	199	166	3.3	133
4.95	4.12	198	165	3.27	132
4.92	4.09	197	164	3.25	131
4.9	4.07	196	163	3.22	130
4.89	4.04	195	162	3.2	129
4.87	4.02	195	161	3.17	128
4.85	3.99	193	160	3.15	127
4.82	3.97	192	159	3.12	126
4.8	3.94	191	158	3.1	125
4.77	3.92	190	157	3.09	124
4.75	3.89	189	156	3.07	123
4.72	3.87	188	155	3.05	122
4.7	3.84	187	154	3.02	121
4.67	3.82	186	153	3	120
4.65	3.79	185	152		
4.62	3.77	184	151		
4.6	3.74	183	150		
4.57	3.72	182	149		
4.52	3.7	181	148		
4.5	3.67	180	147		
4.47	3.65	179	146		
4.45	3.62	178	145		
4.42	3.57	177	144		
4.4	3.55	176	143		
4.37	3.52	175	142		
4.35	3.5	174	141		
4.32	3.47	173	140		
4.3	3.45	172	139		
4.27	3.42	171	138		
4.24	3.4	170	137		
4.22	3.37	169	136		
4.19	3.35	168	135		
Less than 3	Not enough				

Students' independent work is evaluated during the current control of the topic on the appropriate classes. Assimilation of topics that are submitted only for independent work is controlled in the final control.

Scores of students studying in one specialty, taking into account the number of points scored from disciplines are ranked on the ECTS scale as follows:

ECTS score	Statistical indicator
A	the best 10% of students

B	the next 25% of students
C	The next 30% of students
D	The next 25% of students
E	Last 10% of students

Ranking with assignments of grades "A", "B", "C", "D", "E" is carried out for students of this courses that are studied in one specialty and have successfully completed the discipline.

Students who receive grades FX, F ("2") are not included in the list of ranked students.

Students with an FX grade automatically receive an "E" score after retaking.

Discipline points for students who have successfully completed the program are converted into a traditional 4th

score scale according to the absolute criteria, which are given in the table below:

Scores from the discipline	Score on a 4-point scale
From 170 to 200 points	5
From 140 to 169 points	4
From 139 points to the minimum numberpoints that must be scored by the student	3
Below the minimum number of points that must be recruited by a student	2

The ECTS grade is not converted to the traditional scale, as the ECTS scale is also four-point scale independent.

The objectivity of the assessment of students' learning activities is checked by statistical methods (correlation coefficient between ECTS assessment and national scale assessment).

#### 12. Methodological support:

Abstracts, extended plans and multimedia presentations, plans of practical classes, plans independent work, lists of questions, tasks for current, final and self-control of knowledge students' skills, lists and algorithms for performing practical skills.

List of questions for self-control:

1. Prosthetic dentistry. Definition of academic discipline, its purpose, tasks. Basic directions of development of this science. The contribution of the staff of the department to the development of Prosthetic dentistry.
2. Diagnosis in Prosthetic dentistry. Methods of examination of the patient Components diagnosis (etiological, functional, anatomical).
3. Methods of examination of the patient in the clinic of Prosthetic dentistry. Medical history.
4. Features of history taking, the sequence of the patient's examination.
5. Instrumental and special research methods in Prosthetic dentistry.
6. X-ray methods of research, methods, informativeness for establishment final diagnosis.
7. Electromyography, methods, informativeness for diagnosis.
8. Gnatodynamometry. Reserve and residual capacity of the periodontium, practical significance. Static and dynamic methods for determining the effectiveness of chewing.
9. Functional methods of research of the masticatory device
10. Preparation of the oral cavity for dental prosthetics, types of surgical, therapeutic, orthodontic) their volume and value.
11. Classification of dentition defects according to Bethelman, Kennedy. Their importance in the clinic Prosthetic dentistry.
12. Bite. Physiological and pathological occlusion. Age characteristics of occlusion.
13. Mobility and pliability of the oral mucosa. Classifications and meanings with removable prosthetics.
14. The structure of the oral mucosa. Its changes in dental prosthetics.
15. Marginal periodontium. Anatomy of the dentition. Structure, functions and meanings.
16. Types of atrophy of the jaws. Factors causing the development of atrophy of the jaws and their clinical value.



17. Anatomy of the lower and upper jaws, their functional features.
18. Components of the masticatory system and their functional interaction.
19. Chewing muscle groups and their functions are normal. The phenomenon of coordinated antagonism, synergism in the work of the masticatory muscles.
20. Facial muscles and its functions.
21. Relative physiological rest of masticatory muscles, its value in clinic  
Prosthetic dentistry.
22. Neuromuscular system. Reflexes of the dental-maxillary system. The concept of periodontomuscular, gingivomuscular and myostatic reflexes. Their significance.
23. Anatomical features of the temporomandibular joint. Basic structural elements and their functional significance.
24. The mechanism of movements of the lower jaw. Comparative characteristics of anatomical and physiological mechanisms of the masticatory apparatus in different groups of animals. The relationship between form and function temporomandibular joint.
25. Articulation. Movements of the lower jaw in the sagittal plane and transverse. Basic parameters of these movements.
26. Movements of the lower jaw in the vertical, sagittal and transverse directions. Phases chewing movements in Giza.
27. The mechanism of movements of the lower jaw in the sagittal direction. The incisal and articular pathways, their relationship. The Christensen phenomenon. Significance in the design of complete removable dentures.
28. Movements of the lower jaw in the transverse direction (Bennett's angle, the ratio of dental rows).
29. Sagittal and transverse occlusal curves, their importance in the design of artificial teeth rows in the manufacture of complete removable dentures. Working and balancing parties (characteristics of occlusal contacts).
30. Methods of recording (registration) of movements of the lower jaw (intraoral, extraoral).
31. Biomechanics of mandibular movements, its significance for the design of dentures. Definition of "articulation", "occlusion" and their meaning for the construction of dental prostheses.
32. The structure of the dentition. The concept of dental, alveolar and basal arches. Occlusal curves (Spee and Wilson).
33. Factors that ensure the stability of the teeth.
34. Anatomy of the occlusal surface of teeth and dentitions. Occlusal contacts of teeth.
35. Factors of occlusion (articular path; Bennett's movement; occlusal plane - Spee, Wilson; morphology of occlusion; incisal path; distance between the articular heads).
36. Structure and functions of the periodontium. Chewing pressure transformation.
37. Structure and functions of the periodontium. Tooth mobility, diagnostic value.
38. Types of occlusion. Contacts of teeth at the central occlusion. The ratio of front and corner teeth in the position of central occlusion.
39. Occlusal concepts in different types of prosthetics. Restoration of functional occlusion with different types of prosthetics
40. Contacts of teeth when extending the lower jaw to the front and its lateral movements. Premature contacts - supracontacts.
41. The main provisions of the articular theory of mandibular articulation and its practical significance.
42. The main provisions of the spherical theory of articulation and its practical significance.
43. Theory of articulatory equilibrium, basic provisions.
44. Articulators. Purpose, types, basic principles of work.
45. Pain. Anesthesia. Methods of anesthesia in Prosthetic dentistry. Medical and pharmacological analgesics.
46. Possible errors and complications of analgesia (dizziness, collapse, anaphylactic shock), clinical signs, the amount of emergency care.
47. Asepsis and antiseptics in the clinic of Prosthetic dentistry.
48. Disinfection and sterilization of instruments, impressions. Prevention of spread

infectious diseases in a dental clinic.

49. Imipressions and their classification. Materials used to obtain them.

50. Imprint materials. Requirements for them. Characteristics of thermoplastic imipressions materials, indications for their use.

51. Imprint materials. Requirements for them. Characteristics of elastic imipressions materials, indications for their use.

52. Imprint materials. Requirements for them. Characteristics of silicone impression materials, indications for their use.

53. Complications in obtaining fingerimpressions and their prevention.

54. Replacement of defects of hard tissues of teeth with inlays, stumps and pins structures. Clinical and laboratory stages of manufacture

55. Requirements for artificial crowns. Indications for covering the tooth with a crown. Classification crowns. Materials used to make artificial crowns.

56. Consequences of preparation of hard tissues of teeth. The need to use temporary structures.

57. Requirements for stamped metal crown. Types of stamping, materials, tools.

58. Rules of preparation of various functionally oriented groups of teeth under stamped crown. Tools.

59. Clinical and laboratory stages of production of stamped crowns. Types of stamping.

60. The ratio of the edge of the crown with the tissues of the marginal periodontium. Complications when elongated and shortened crown edge, morphological changes in marginal injury periodontium.

61. Plastic crowns. Indications and contraindications to their use. Clinical laboratory stages of their manufacture, materials.

62. Indications for the manufacture of solid crowns. Clinical and laboratory stages.

63. Combined crowns. Clinical indications for their use. Rules of tooth preparation. Manufacturing methods, materials. The mechanism of fixing the facing material.

64. Metal-free Prosthetic structures. Indications for use. Clinical and laboratory stages, modern manufacturing technologies.

65. Bridge dentures. Indications and contraindications to prosthetic defects dentition with bridges.

66. Biomechanics of bridges. Requirements for abutment teeth.

67. Indications for the use of various support elements in bridges. Designs of supporting elements.

68. Constructions of bridges, indications for their use.

69. Comparative characteristics of soldered, unsoldered and solid bridges prostheses.

70. Clinical and laboratory stages of manufacturing stamped-soldered bridges.

71. Solders and fluxes. Silver solder, composition, method of application. The role of fluxes in the process soldering.

72. Metals and alloys used in Prosthetic dentistry. Noble alloys.

73. Metals and alloys used in Prosthetic dentistry. Steel, its grades. Physical chemical properties. The role of alloying elements.

74. Clinical and laboratory stages of manufacturing unsoldered bridges.

75. Modeling of the intermediate part of the bridge. The relationship between its form and topography of the dentition defect.

76. Factors that ensure the fixation of fixed dentures. Rules and fixation sequence.

77. Types of fixing cements (phosphate, glass ionomer, carboxylate), indications for them application.

78. Anatomical and physiological features of the oral cavity with partial loss of teeth.

79. Selection and substantiation of designs of partial removable prostheses with included and distally unrestricted defects of the dentition.

80. Obtaining imipressions in the manufacture of partial removable dentures. Imprint requirements.

81. Methods of fixation of partial removable dentures. The role of biophysical and mechanical methods reinforcements for removable dentures.
82. Support teeth, their value for fixing dentures. Clasp line. Point, linear and planar strengthening of prostheses. Selection of abutment teeth.
83. Classification of clasps. Ways to connect clasps to dentures.
84. The value of the elements of anatomical retention for the fixation of partial removable dentures. Claspless prostheses. Indications for their use.
85. Determination and fixation of central occlusion in groups I and II of dentition defects.
86. Determination and fixation of central occlusion in group III defects of the dentition.
87. The choice of denture design in the presence of one tooth on the upper or lower jaws.
88. Laboratory stages of manufacturing partial removable dentures. Materials that are for this are used.
89. Indications for the manufacture of partial removable prostheses with a metal base. Clinical laboratory stages of manufacture.
90. Casting of metal frames. Metal alloys. Shrinkage compensation of metals.
91. Replacement of dentition defects with clasp dentures. Indications and contraindications to production of clasp prostheses. Structural elements of clasp prostheses and their significance.
92. Diagnostic models. Requirements for them, manufacturing rules. Construction planning clasp prostheses.
93. Parallelometry. Purpose, tasks. Methods of parallelometry. Selection of abutment teeth.
94. Stages of parallelometry.
95. Clasps. Indications for their use. Classification. Components of clasps.
96. Ney staple system. Ways to connect clasps to the frame.
97. Telescopic mounting. Indications and contraindications to the manufacture of partial removable prostheses with a telescopic fixation system.
98. Clinical and laboratory stages of manufacturing removable prostheses with a telescopic system fastening.
99. Attachments (shutters, hinges). Classification. Indications for use.
100. Casting of clasp prosthesis frames on refractory models. Duplication of models. Duplicate materials.
101. Compensation for shrinkage of metals. Molding masses. Metal alloys for manufacturing clasp prostheses.
102. The shape, size and position of the arch of the clasp prosthesis on the upper and lower jaws depending on the topography of the dentition defect.
103. Fitting the frame of the clasp prosthesis. Requirements for a solid frame.
104. Delivery and correction of a partial removable prosthesis.
105. Mechanism and terms of adaptation to partial removable prostheses. Terms of use partial removable dentures.
106. The effect of removable dentures on the tissues of the oral cavity. Diagnosis, clinic and treatment prosthetic stomatitis.
107. Methods of placing teeth with partial removable prosthetics.
108. Artificial teeth. Methods of manufacture, materials. Rules of selection of artificial teeth for placement in removable dentures.
109. Rules of installation of artificial teeth. Fixation in the base of a removable prosthesis.
110. Compression pressing of plastics. Materials, equipment. Methods of plastering models in cuvette, plastic packaging.
111. Plastic packaging by casting. Plastering of models in a ditch. Properties of plastic for packaging.
112. Stages of polymerization of plastics. Preparation of plastic for packaging.
113. Modes of polymerization. Insulating materials.
114. Laboratory stages of manufacturing partial removable prostheses from thermoplastic materials. Comparative characteristics of prostheses with plastic and thermoplastic base.
115. Materials used for the manufacture of bases for removable dentures. Acrylic

plastics. Thermoplastic materials. Composition, method of application. Positive and negative properties.

116. Evaluation of the quality of polymerization of base materials. Porosity, types, causes and ways to eliminate.

117. Examination of the oral cavity in patients with complete absence of teeth.

118. Preparation of the oral cavity for prosthetics with complete removable prostheses.

119. Classification of edentulous jaws. Morphological features of the structure of the edentulous jaws that follow to consider at manufacturing of full removable prostheses.

120. Classification of the flexibility of the mucous membrane of the edentulous jaws (Lund, Suple). Value to select the method of obtaining impressions.

121. Movable, immobile, passively mobile mucous membrane. Transitional fold. Neutral zone. Topography of the neutral zone on the upper and lower jaws.

122. Anatomical features of edentulous jaws, which are important for the fixation of lamellar removable dentures.

123. Classification of impressions for the manufacture of complete removable dentures (height of the edges, the degree of compression of the mucous membrane). Impression masses, their properties, indications to application.

124. The boundaries of the prosthetic bed in the manufacture of complete removable prostheses. Valve area, its topography.

125. Fixation, stabilization, balance of complete removable dentures and factors that provide them.

126. Methods of obtaining functional impressions of edentulous jaws.

127. One-step method of making individual wax spoons on the top and bottom jaws. The method of obtaining functional impressions with their help (Vasylenko's method).

128. Methods of functional imprint according to Herbst. Functional tests, their clinical justification.

129. Making solid individual spoons. Fitting individual spoons for Herbst's method on the upper and lower jaw (functional tests).

130. Compression and decompression molds. Rationale for their receipt.

131. Methods of obtaining functional impressions under masticatory pressure. Indications to application.

132. Methods of obtaining a mold with differentiated pressure on the mucous membrane.

133. Determination of the central ratio of the jaws in the complete absence of teeth.

134. Rules of manufacture and requirements for wax templates with occlusal rollers.

135. Determination of the prosthetic plane in determining the central ratio.

136. Anatomical and anthropometric methods for determining the alveolar height.

137. Anatomical and physiological method for determining interalveolar height (bite height).

138. Aesthetic and functional disorders with changes between alveolar heights.

139. Fixation of the lower jaw in a neutral position.

140. Checking the correctness of determining the central ratio of the jaws.

141. Landmarks for the installation of artificial teeth.

142. Apparatus that reproduce the movements of the lower jaw.

143. Occluders and articulators, their classification. Principles of design.

144. Classification of devices that reproduce the movements of the lower jaw.

145. The main provisions of the articulation problem Postulates Bonneville, Hanau.

146. Articular theory of articulation (Gizi, Hanau, Bonneville).

147. Spherical theory of articulation (Monson, Sapozhnikov, Chernykh, Khmelevsky).

148. Out-of-mouth methods of registration of individual movements of the lower jaw.

149. Christensen's phenomenon, intraoral method of determining the angles of the sagittal and transverse pathways (method of Efron, Katz, Gelfand).

150. Installation of artificial teeth in complete dentures.

151. Requirements for the upper occlusal roller.

152. Requirements for the lower occlusal roller.

153. Anatomical setting of teeth.

154. Staging of teeth according to ME Vasiliev.



155. Placement of teeth on a spherical surface.
  156. Check of a design of full removable prostheses.
  157. Imposition of complete dentures. Adaptation.
  158. Rules and recommendations for the use of complete dentures.
  159. Pathological effects of materials used in Prosthetic dentistry
  160. Differential diagnosis, treatment and prevention
  161. Diseases of the temporomandibular joint. Etiology, clinic, differential diagnosis, treatment.
  162. Prosthetic interventions in the complex treatment of periodontal disease. Elimination of traumatic occlusions; temporary and permanent splinting; designs of removable and non-removable tires and prosthetic tires
  163. Principles of comprehensive examination and treatment of dental and maxillary deformations. Mechanisms of occurrence. Clinical forms.
  164. Excessive abrasion of the hard tissues of the teeth. Etiology, pathogenesis, clinical forms. Prosthetic treatment
  165. Maxillofacial Prosthetics and maxillofacial prosthetics of increased complexity. Definition, purpose and tasks, stages of development.
  166. Dental prosthetics of patients with injuries of the maxillofacial area.
  167. Classification of maxillofacial devices used to treat the wounded and patients, their characteristics.
  168. Classification of fractures of the upper and lower jaws. Features and mechanism of displacement fragments of the lower jaw.
  169. Features of traumatic injuries of the maxillofacial area.
  170. Transport tires. Ligature binding. See. Indications for use.
  171. Forming and fixing devices for osteoplasty of the jaws in the wounded in the maxillofacial site and patients.
  172. Contractures of the mandible, their classification. Development mechanism contractures. Prosthetic interventions in the treatment of contractures.
  173. Etiology and clinic of microstomy. Dental prosthetics of maxillofacial wounded at microstomy.
  174. Prosthetics during resection of the jaws. Direct prosthetics.
  175. Ectoprostheses.
  176. Implantation. Indications and contraindications for implantation.
  177. Types of implants. Indications for use.
  178. One-stage implantation. Indications for conducting. Prosthetics of patients with one-stage methods.
  179. Two-stage implantation. Indications for conducting. Prosthetics of patients with a two-stage method.
  180. Removable and conditionally removable structures of prostheses based on implants.
- The list of dental manipulations which the graduate from discipline should possess
- "Prosthetic dentistry" according to the educational and qualification characteristics**
1. Selective grinding of teeth, alignment of the occlusal surface, occlusogram.
  2. Production of temporary tires and splinting for fractures of the jaws.
  3. Removal of crowns.
  4. Correction of partial and complete removable dentures.
  5. Ligature ligation of teeth.
  6. Obtaining anatomical and functional impressions with different impression material.
  7. Obtaining models of dentitions and prosthetic bed.
  8. Checking the design of the prosthesis in the partial and complete absence of teeth.
  9. Preparation of teeth under a metal stamped and plastic crown.
  10. Fitting an artificial crown.
  11. Fixation of crowns and bridges.
  12. Examine the patient. Establish a preliminary and final diagnosis on the basis survey data (clinical and laboratory).
  13. Propose a plan of Prosthetic treatment.

14. To offer the plan of preparation of an oral cavity of the patient for prosthetics.
15. Get an anatomical impression of the lower and upper jaws.
16. Fitting a hard spoon and getting functional impressions when full lack of teeth.
17. To fix the central occlusion at the II group of defects. Identify and record the central ratio of the jaws in group III and group IV defects.
18. Anesthesia during tooth preparation.
19. Preparation of teeth under a metal stamped crown.
20. Preparation of teeth under a solid combined crown.
21. Fit artificial crowns.
22. Checking the design of the bridge.
23. Fit a solid bridge.
24. Fixation of crowns and bridges.
25. Check of a design of a partial and full removable prosthesis.
26. To hand over partial or full removable prostheses.
27. Correction of partial or complete removable dentures.
28. Evaluate the diagnostic model in the parallelometer and plan the design of the clasp prosthesis on a diagnostic model.
29. Fit the frame of the clasp prosthesis.
30. Pass the clasp prosthesis.
31. Staging teeth according to the method of Vasiliev.
32. The choice of the design of the bridge.
33. Ligature ligation of teeth according to Ivy and Limberg.
34. Prepare the root of the tooth for the manufacture of a cast pin stump and hold stump simulation.
35. Analyze the odontoparadontogram of the patient.
36. Carry out selective grinding of teeth.
37. Alignment of the occlusal curve by means of grinding teeth.
38. Alignment of the occlusal curve with an orthodontic tool.
39. Occludogram.
40. Removal of crowns.
41. Obtaining impressions for the manufacture of solid non-removable structures.
42. Prosthetics using implants.
13. List of educational and methodical literature

#### Basic literature

1. Klemin VA Prosthetic dentistry. Textbook / VA Klemin, VE Zhdanov. –K. : VSI «Medicine», 2010. -224p. Recommended by the Ministry of Education and Science of Ukraine as an educational manual for students of higher medical educational institutions IV level of accreditation GRIFF LETTER № 1 / 11-10347 dated 09.11.2010.
2. Makeev VF, Stupnitsky RM Theoretical foundations of Prosthetic dentistry (textbook). –Lviv: LNMU named after Danylo Halytskoho, 2010, -394 p.
3. Nespryadko VP, Rozhko MM Prosthetic dentistry. Kyiv, Book Plus, 2003.
4. Chulak LD, Shuturminsky VG Clinical and laboratory stages making dentures. Odesa. Odessa honey. University, 2009, 318с.
5. Emergency care in dentistry / VA Klemin, AV Pavlenko, VN Arendaryuk and others, ed. В.А.Клемина. –Donetsk: Publisher Zaslavsky A.Yu., 2011. -144p.
6. Rozhko MM, Nespryadko VP, Mikhailenko TN etc. Denture machinery. - K. ; Book plus, 2006. - 544 p.

#### Additional literature

1. Barabbas GM, Strelkovsky KM Technique of making maxillofacial prostheses. - K., 1992.

2. Levitov AN, Rubanenko VV, King MD Maxillofacial Prosthetics:course of lectures.- Poltava, 1995. - 80 p.
3. Attacks AL Articulation and prosthetics in dentistry.- K. : Health, 1984.
4. Fundamentals of deontology in dentistry. Manual for students and doctors / Under ed. GP Ruzina. - Vinnytsia: New book, 2008. -120p.
5. Maevski SV Dental gnathophysiology. Occlusion norms and functions of the dental system / Maevski SV - Lviv: GalDent. - 2008. -144p.
6. Klemin VA Dental crowns made of polymeric materials. –M. : MED pressinform, 2004. -176p.
7. VA Klemin. Morphofunctional and clinical assessment of teeth hard tissue defects / VA Klemin, AV Borisenko, PV Ishchenko. - M. : MED press-inform, 2003. - 111 p.
8. Klemin VA Diagnostic model of the jaw / VA Klemin. - M. : MEDpress-inform, 2006. -256p.
9. Aesthetic aspects of restorative dentistry (monograph) / VN Shabanov, AP Pedorets, OV Shabanov, VA Klemin. Elista: ZAORNPP Ginger, 2010. -111p.
10. Trouble VI Pathological abrasion of the hard tissues of the teeth and basic principles its treatment (Training manual). - K. : OJSC "Publishing House Kyivska Pravda, 2002. - 96p.
11. Borisenko AV, Nespryadko VP Composite sealing and facing materials. A practical guide. - Kyiv, Book Plus, 2002. - 221 p.
12. Вадалян Х.А. Treatment of fractures of the jaws and bones of the facial skeleton: Textbook. allowance. - 1984.
13. Barabbas GM, Strelkovsky KM Technique of making maxillofacial prostheses. - K., 1992.
14. Gavrilov EI Deformations of dentitions. - M. : Medicine, 1984. - 94p.
15. Hitlan EM, Mole MK Guide to clasp prosthetics. - K. : Health, 2001. - 140 p.
16. Gumetsky RA, Rozhko MM, Zavadka OE, Skripnikov PM Complication of local anesthesia in the maxillofacial area: Manual in 3 volumes - Lviv: Ivano-Frankivsk: Poltava: Nautilus Publishing House, 2002. - 231 p.
17. A collection of algorithms for practical skills and abilities to practice oriented state exam in the specialty 7.110106 "Dentistry": Textbook / LD Chulak, KM Kosenko, AG Gulyuk and others; For the general ed. L.D. Chulaka. - Odesa: Odessa. State. Honey. University, 2004. - 264 p. - Ros. language.
18. King MD, Korobeynikov LS, Kindiy DD, Yarkovy VV Odzhubeyskaya O.D. Tactics of curation of patients in the clinic of Prosthetic dentistry. Poltava: Astraya, 2003 - 52 p.
19. King MD, Korobeynikov LS, Kindiy DD, Yarkovy VV Workshop with Prosthetic dentistry. Part II. Poltava: PE "Formika", 2002. – 168.
20. Levitov AN, Rubanenko VV, King MD Maxillofacial Prosthetics:course of lectures.- Poltava, 1995. - 80 p.
21. Khvatova VA Diagnosis and treatment of functional disorders occlusions //И.Новгород. - 1996. - 275p.
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23. Abakarov SI. Modern designs of fixed dentures.- M. : Medicine, 1994.
24. Kalinina NV, Zagorsky VA Prosthetics with complete loss of teeth.- Medicine, 1990.
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28. Schwartz A.D. Solid cast clasps. - Moscow, 2005. - 70 p.
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