

DANYLO HALYTSKY LVIV NATIONAL MEDICAL UNIVERSITY

Department of Therapeutic Dentistry

"APPROVED"

First Vice-Rector for
Scientific and Pedagogical Work
Associate Professor Iryna SOLONYNKO



2024

**SYLLABUS
of the subject**

OC 27.3

"Therapeutic dentistry"

Second (master's) level of higher education

Field of Knowledge 22 "Healthcare"

Specialty 221 "Dentistry"

Faculty, year: Dentistry, 3rd, 4th year

Discussed and approved at the
Methodical Meeting of the Department of
Therapeutic Dentistry

Minutes No. 4, dated 16 April 2024

Head of the Department

Prof. Volodymyr ZUBACHYK



Certified by the Specialized Scientific and
Methodical Board for Dental Subjects

Minutes No. 3, dated 17 April 2024

Chair of the Profile Methodical

Board

Prof. Volodymyr ZUBACHYK

The syllabus of the subject «Therapeutic dentistry. Periodontology» is developed at the Department of Therapeutic Dentistry of Danylo Halytsky Lviv National Medical University for the 3rd - 4rd year students of the Dentistry Faculty in the Specialty 221 Dentistry.

The syllabus is discussed and approved at the Methodical Meeting of the Department of Therapeutic Dentistry (Minutes No. 4 dated 16 April 2024) and certified by the Specialized Scientific and Methodical Board for Dental Subjects (Minutes No. 3 dated 17 April 2024)

Changes and additions to the syllabus in the 2023-2024 academic year:

№	Content of changes (additions)	Minutes of the meeting of the Department, date	Notes

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Chair of the Department of Therapeutic Dentistry
DMSci, Prof. Zubachyk, V.M.

Signature

The training of doctor-dentist in Ukraine is carried out in accordance with the new sectoral (branch) standards as to higher education 1101 “Medicine” on specialty 7.110106 “Dentistry”.

The working programme is designed in response to the following normative documents:

- Order No 1229 dated from 24.04.2015 “On implementation of new curriculum for pre-diploma training of specialists on specialty “Dentistry”;
- The Law of Ukraine “On higher Education”(Education act), dated from 01.07.2014 No 1556-VII;
- Order of the Ministry of Education of Ukraine No 47 dated from 26.01.2015 “ On the peculiarities of working out of curricula for 2015/2016 academic year;
- The Letter (directive) of the Ministry of Education of Ukraine dated from 20.01.2015 No 1/9-19 “ With regards to attestation of applicants of higher education and organization of the educational process”, dated from 13.03.2015 No 1/9-126 “ On the peculiarities of organization of the educational process and working out of curricula in 2015/2016 academic year;
- The Letter (directive) of the Ministry of Health Care of Ukraine dated from 24.03.2015 No 08.01-47/8986 and dated from 16.04.2015 No 08.01-47/12037 “On approval of the adjusted (standardized) for pre-diploma training of specialists on specialty 1201 “Medicine” and 1202 “Pharmacy”;
- The new curriculum of specialist training of educational-qualification level “specialist” of qualification “doctor-dentist” in higher educational establishments IV level of accreditation on specialty “Dentistry” No 929, dated from 30.06.2019;
- The educational-qualification characteristic (EQC) and educational-and-professional programme (EPP) of specialist training , confirmed by the Order issued by the Ministry of Education of Ukraine dated from 16.04.03 No 239 “ On approval of constituents of the sectoral (branch) standards of higher education in specialist training 1101 “Medicine”;
- The programme for subject matter “Restorative dentistry” for students of higher educational establishments IV level of accreditation on specialty 7.110106 “Dentistry” (Kyiv, 2011);
- Recommendations as to development of programmes of subject matter, approved by the Order of the Ministry of Health Care of Ukraine dated from 24.03.2004, No 152 “On approval of recommendations as to development of programmes of subject matter” with alterations and supplements, introduced in accordance with the Order of the Ministry of Health Care of Ukraine dated from 12.10.2004, No 492 ” On insertion of alterations and supplements to recommendations as to development of programmes of subject matter”;
- The Order of the Ministry of Health Care of Ukraine dated from 31.01.03, No 148 “Taking measures as to implementation of the principles of the Bologna Declaration in system of higher medical and pharmaceutical education”.

In the general system of “doctor-dentist” training, the restorative dentistry is the discipline of primary importance. The principal aim of the Department of Restorative dentistry is to train a doctor-dentist capable to decide questions of diagnosis, treatment and prevention of dental diseases. Teaching of restorative dentistry in the majority of higher medical establishments in Ukraine is in the Departments of Propaedeutics of restorative dentistry and Restorative dentistry by delivering lectures and conducting practical classes as well as gaining medical experience through practical training. In lectures it is necessary to enlighten the data of etiology and pathogenesis of dental diseases, their clinical courses, treatment and prophylaxis taking into account the present-day achievements in medicine and biology, on the grounds of continuity of the organism and its indissoluble connection with environment.

In practical classes and during the practical training, a student must obtain experience in examining patients, learn how to make a differential diagnosis and carry out the basic methods of treatment and prophylaxis of dental diseases.

At the Department, the first-year students are taught “Ergonomics (biotechnology) in dentistry”: 1,5 credits, lectures - 4 hours, practical classes – 16 hours, self-independent study – 25 hours. Practical classes are finalized with a credit. After mastering “Propaedeutics of restorative dentistry” (4 credits

– 120 hours), the students proceed to “Restorative dentistry” lengthwise III-V years of studies, namely:

- odontology – III year of studies;
- periodontology - IV year of studies;
- diseases of oral mucosa – V year of studies.

In accordance with the Order No 1229 dated from 24.04.2015 “On implementation of new curriculum for pre-diploma training of specialists on specialty “Dentistry” in higher educational establishments of Ukraine, IV level of accreditation (2010), the students are to master the “Restorative dentistry” within 210 hours and 7 credits (lectures - 30 hours, practical classes- 120 hours and – independent work – 60 hours).

During the V-VI semesters, the students are taught to examine the dental patient with odontopathology, etiology, pathogenesis, clinic, diagnosis, treatment, prophylaxis of dental caries, non-cariou lesions of the hard tissues of a tooth, as well as endodontal diseases (pulpitis, periodontitis).

Syllabus of the academic discipline

“Therapeutic dentistry”

Structure of the academic discipline	Number of hours				Year of education, semester	Type of control
	In all	Classes		CPC		
		lectures	Practical lessons			
Periodontology	6 credits 180 hours	20 hours	90 hours	70 hours	IV year 7-8 semesters	credit
semesters						
Periodontology	2,5 credits, 75 hours	4 hours	32 hours.	39 hours.	7 semester	credit
Periodontology	3,5 credits, 105 hours	6 hours	48 hours	51 hours.	8 semester	credit

**Plans of lectures, practical lessons, out of class work and individual work in discipline
„Therapeutic Dentistry” for the 3-rd year
English-medium students (5-th semester)**

LECTURES (8 hours)

No	Topic of the lecture	Hours	
1.	Methods of patients examination and anesthesia in clinic of therapeutic dentistry.	2	
2.	Dental caries. Modern conceptions about the etiology and pathogenesis of caries. Statistical indices. Classification of dental caries.	2	
3.	Clinic, diagnosis and differential diagnosis of dental caries. Local and general treatment of dental caries. Caries prevention.	2	
4.	Non-cariou tooth defects. Classification. Inheritable and inborn defects of dental hard tissues. Classification. Clinic, diagnosis, treatment and prevention.	2	

PRACTICAL LESSONS

**„Methods of patients examination in dentistry. Diseases of the tooth hard tissues ”– 2,5 credits
(75 hours), lectures 8 hours, practical lessons – 28 hours, out of class work – 39 hours**

No	Topic	Practical lessons	
1.	Methods of clinical examination of dental patient, their role in the diagnostics of the diseases of oral cavity. Characteristic of the pain syndrome in different diseases.	2	
2.	Additional methods of diagnostics. Electric pulp test (EPT), radiographic, luminescence and transilluminational examination. Diagnostics tests. Laboratory investigations.	2	
3.	Dental deposits, their types. Mechanism of development, structure, chemical composition, microbiology. Professional hygiene of oral cavity, estimation of its efficiency and the role in the prophylaxis of dental diseases.	2	
4.	Anesthesia in therapeutic dentistry, types, methods, equipment, indications for use. Rendering help in emergency situations.	2	
5.	Dental caries. Definition. Statistical indices. Classification of dental caries. Modern views on the etiology and pathogenesis of dental caries.	2	
6.	Acute and chronic incipient caries (macula cariosa). Acute and chronic superficial caries. Pathomorphology, clinic, diagnosis, differential diagnosis, treatment. Medications and methods of re-mineralization therapy. Clinical skills training.	2	
7.	Acute and chronic superficial caries. Pathomorphology, clinic, diagnosis, differential diagnosis, treatment. Acute and chronic middle caries. Pathomorphology, clinic, diagnosis, differential diagnosis, treatment.	2	

8.	Acute and chronic deep (profound) caries. Pathomorphology, clinic, diagnosis, differential diagnosis, treatment. Pastes for indirect pulp capping, groups, peculiarities of application.	2	
9.	Generalized caries, the most acute course of caries. Secondary caries of devitalized and vital teeth. Clinic, diagnosis, differential diagnosis, peculiarities of treatment.	2	
10.	The concept of dental restoration. Planning of the restoration. Instruments and equipment, Working out of practical skills.	2	
11.	Clinical estimations of the quality of dental fillings. Final finishing of the filling. Correction and polishing of the fillings.	2	
12.	Mistakes and complications in caries diagnosis and treatment.	2	
13.	Non-carious tooth defects. Classification. Inheritable and inborn defects of dental hard tissues. Classification, etiology, clinic, diagnosis, treatment .	2	
14.	Teeth bleaching in dental office, systematization of applied methods. Indications and contraindication for different types of bleaching. Clinical illustrations	2	
	Total number	28	

OUT OF CLASS WORK (39 hours)

	Topic	Hours
1	Preparation for practical lessons: theoretical and practical skills training.	28
2	Independent work with the topics not included in practical lessons: <ul style="list-style-type: none"> - Structure and equipment of the dental clinic. 1 - Ethics and deontology in dentistry. 2 - Medical Dental documentation. Medical history report – as medical, scientific and legal document. 2 - Modern methods of the working field isolation in dentistry. Rubber dam set: composition, indication for use. Stages of Rubber dam application according to different clinical situations. 2 - Prophylactic of dental caries. The role of individual and social preventive measures. Prophylactic of dental caries in pregnant women. Estimation of the prophylactic measures efficiency. 2 - General treatment of dental caries. 2 	

**Plans of lectures, practical lessons, out of class work and individual work in
discipline „Therapeutic Dentistry” for 3-rd year
English-medium students (6th term)**

LECTURES (8 hours)

No	Topic of the lecture	Hours	
1.	Pulpitis. Etiology and pathogenesis of Pulpitis. Pulp pathology classification. Clinic of the disease, differential diagnosis.	2	
2.	Systematization of treatment methods of patients with Pulpitis. The main principles and protocols. Materials and medical instruments used.	2	
3.	Pericementitis. Etiology and pathogenesis. Classification of the Pericementitis. Clinic of the disease, differential diagnosis.	2	
4.	Peculiarities of treatment of the periapical pathology (Pericementitis). The protocols of treatment. Medications and materials.	2	

PRACTICAL LESSONS

„Diseases of the endodontium (Pulpitis, Periodontitis)”– 4,5 credits (135 hours): lectures – 8 hours, practical lessons – 61 hours, out of class work – 66 hours.

No	Topic	Practical lessons	
1	Medical history report, its content, requirements for the structure. Anatomical-physiological characteristic of the pulp. Age changes. . Classification of Pulpitis.	3	
2	Acute Pulpitis. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis.	3	
3	Chronic Pulpitis. Etiology, pathogenesis, clinic, diagnosis. And differential diagnosis.	3	
4	Systematization of treatment methods of Pulpitis. Method of full and partial pulp preservation. Indications for the method’s implementation and possible complications. Characteristics of medicines.	3	
5	Method of vital pulp extirpation, indications for the method’s implementation and possible complications.. Characteristic of medicines.	3	
6	Method of non-vital pulp extirpation, indications for the	3	

	method's implementation and possible complications. Characteristic of medicines. Modern technologies.		
7	Peculiarities of root canal preparation and cleaning in the treatment of Pulpitis. Practice of practical skills.	3	
8	Obturation of the root canal system. Modern materials and methods. Practice of practical skills.	4	
9	Apical Periodontitis (Pericementitis): etiology and pathogenesis. Classification of pericementitis. Acute apical Pericementitis: etiology and pathogenesis. Pathological-morphological changes. Clinic, differential diagnosis.	4	
10	Chronic Apical Periodontitis (Pericementitis): etiology and pathogenesis. Pathological-morphological changes. Clinic, differential diagnosis.	4	
11	Exacerbation of Apical Pericementitis: etiology and pathogenesis. Clinic, differential diagnosis. Scheme of treatment. Prognosis. Practice of practical skills.	4	
12	Conservative method of treatment of Apical Pericementitis, indications and contraindications. Scheme of treatment of Acute Apical Pericementitis. Modern technologies, medications. Practice of practical skills.	4	
13	Peculiarities of modern methods of root canal preparation and cleaning. Medicines.	4	
14	Principles and scheme of treatment of Chronic Apical Pericementitis. Periapical therapy. Medicines.	4	
15	Peculiarities of root canal preparation and cleaning in the treatment of Apical Pericementitis. Obturation of the root canal system. Modern materials and methods. Practice of practical skills.	4	
16	Peculiarities of the tooth crown restoration after the endodontic treatment. The use of posts in root canals. Bleaching of teeth. Practice of practical skills.	4	
17	Mistakes and complications in Pulpitis and Pericementitis diagnosis and treatment. Their reasons, prevention and correction.	4	
	The amount of academic hours	61	

OUT OF CLASS WORK

(66 hours)

No	Topic	Hours
1.	<u>Preparation for practical lessons</u> □ <u>theoretical and practical skills training</u>	51
2.	<u>Independent work with the topics not included into the practical lessons:</u>	
	- Peculiarities of the examination of patients with pulp pathology	3
	- Anesthesia in Pulpitis treatment. Methods and medicines.	3
	- Anatomical-physiological characteristic of tissues of the periodontal ligament. Peculiarities of the examination of patients with periapical pathology.	3
	- Conservative-surgical methods of treatment of apical pericementitis.	3

	- Physiotherapeutic methods of treatment of diseases of the endodontium. Indications and contraindications. -	3
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The main purpose of studying the discipline “Restorative dentistry” lies in training students – future doctors-dentists, to be skilled enough to work in dental clinics. The obtained detailed and specific knowledge will help them to diagnose and treat dental caries, pulpitis, periodontitis and non-carious lesions of teeth.

The final goal of the discipline “Restorative dentistry” is determined as to the training of doctors on speciality “Dentistry”. The description of the objectives is formulated as the skills in the form of purpose-oriented tasks. Under the provisions of the purpose-oriented tasks to credit test, the specified objectives are formulated in the form of certain skills, purpose-oriented tasks which ensure the achievement of the final goal of the studying of the discipline.

The final objectives of the discipline:

- to enlighten the application of asepsis and antisepsis principles in clinics of restorative dentistry;
- to be familiar with etiology, pathogenesis of dental diseases and the clinical course;
- to provide the treatment and preventive measures with due regard for the present-day achievements in medicine;
- in practical classes and during his/her practical training, the student has to master the practical skills in examining the patient, be ready to make a differential diagnosis and perform the basic methods of treatment and prophylaxis of dental diseases.

Syllabus of the academic discipline “Periodontology”

According to the standard of higher education of the second (master) degree of higher education field of knowledge 22 “Health care” specialty 221 “dentistry”

Description of the academic discipline

The teaching objectives of the thematical module.

No 1:

Diseases of the periodontium. Systematisation of periodontal diseases. Peculiarities of clinical examination in periodontal pathology.

The teaching objectives of the thematical module No 2:

Inflammatory periodontal diseases (papillitis, gingivitis, localized periodontitis)

The content of the curriculum on the 4-th year of studies, VII semester includes 6 credits (according to ECTS) or 180 hours, 10 hours are envisaged for lectures, 110 hours for practical classes and 60 hours for independent study.

The teaching material of the VIII semester is divided into 2 thematical modules. The teaching objectives of the thematical module.

No 1: Dystrophic-inflammatory periodontal diseases (generalized periodontitis, periodontosis)

The teaching objectives of the thematical module No 2:

Prophylaxis and dispensaryization of patients with periodontal diseases

The Guide for Practical Classes on Therapeutic Dentistry includes: short characteristic of the theme for each lesson; control questions of the material studied test assignments and situation – based tasks as well as reference literature. The students are awarded credits for each module and at the end of the course they are awarded credits for the subjects they learn

**Plans of lectures, practical lessons, out of class work and individual work in discipline
„THERAPEUTIC DENTISTRY” for the 4-th year
English-medium students (7-th semester)**

LECTURES (4 hours)

№	Topic of the lecture	Hours	
1.	Periodontology as a part of therapeutic dentistry. Anatomical-physiological peculiarities of periodontal tissues. Methods of examination of patients with periodontal pathology. Diseases of the periodontium. Terminology. Classification.	2	
2.	Inflammatory diseases of the periodontal tissues. Etiology, pathogenesis, clinical signs, diagnosis. Treatment. Prophylaxis	2	

PRACTICAL LESSONS

“Diseases of the periodontium. Systematization of the periodontal diseases. Peculiarities of clinical examination in periodontal pathology”– 2,5 credits (75 hours): lectures – 4 hours, practical lessons – 32 hours, self -education – 39hours.

№	The topic	Practical lessons	Independent work
1.	Anatomy, histology, physiology of the periodontium (the gums, the alveolar process, the periodonal ligament, the tooth root cementum). Modern views on the systematization of periodontal diseases. Prevention of accidents in the clinic of therapeutic dentistry.	4	2
2.	Peculiarities of clinical examination of patients with periodontal pathology. The most important clinical methods of examination. Periodontal indices. Formation mechanism of supra- and subgingival dental deposits, their influence on the condition of periodontal tissues and methods of their removal.	6	2
3.	Methods of examination of the alveolar bone. Laboratory and functional methods of diagnosis in patient with periodontal	6	2

	pathology.		
4.	Inflammatory periodontal diseases Papilitis. Catarrhal gingivitis. Hypertrophic gingivitis. Ulcerative gingivitis. Etiology, pathogenesis, classification, clinical sings, differential diagnosis.	6	3
5.	Treatment and prophylaxis of the inflammatory periodontal diseases (papilitis, catarrhal gingivitis, hypertrophic gingivitis, ulcerative gingivitis). Gingival atrophy. Recession of the gums.	6	2
6	Localized periodontitis. Etiology, pathogenesis, classification, clinical sings, differential diagnosis. Treatment and prophylactic of localized periodontitis.	4	2
	Hours together	32	39

OUT OF CLASS WORK (39 hours)

№	Topic	Hours
1.	Preparation for practical lessons: theoretical and practical training.	18
2.	Working-out of practical topics not included in practical classes:	
	- The contribution of scientists of Ukraine and foreign scientists in the investigation of etiology and pathogenesis of periodontal diseases.	2
	- Estimation criteria of the condition of periodontal tissues.	2
	- Indices in the estimation of periodontal pathology.	3
	- Orthopantomogram analysis	3
	- Writing of dental documentation, the periodontal chart	3
	- Registration of accounting documentation in dentistry, analysis of quantitative and qualitative indicators of the work of dental specialist	2
	- Analysis of the results of the laboratory tests (cytological, histological, bacteriological).	3
	- Conduction and estimation of the additional methods of investigations.	3

Plans of lectures, practical lessons, out of class work and individual work in the discipline

„THERAPEUTIC DENTISTRY” for 4-th year

English-medium students (8th semester)

LECTURES (6 hours)

No	Topic of the lecture	Hours	Independent work
1	Etiology, pathogenesis, clinical examination, diagnosis, differential diagnosis of the dystrophic-inflammatory diseases of the periodontium. Methods of treatment. Maintenance care.	2	
2	Medical examination system (for the prevention and treatment of diseases) for patients with periodontal diseases. Maintenance care and prophylaxis in periodontology.	2	
5	Organization and extend of dental care in military forces of Ukraine in peaceful conditions and during hostilities	2	

PRACTICAL LESSONS

Dystrophic-inflammatory periodontal diseases (generalized periodontitis, periodontosis) – 3,5 credits (105 hours): lectures – 6 hours, practical lessons – 48 hours, self- education – 51hours.

№	The topic	Practical lessons	Independent work
1	Etiology and pathogenesis of dystrophic-inflammatory periodontal diseases. The role of local and general factors. Generalized periodontitis. Classification. Main clinical syndromes of periodontitis.	4	3
2	Clinical-morphological characteristics of different stages of generalized periodontitis. Medical documentation. Periodontal	4	3

	charts.		
3	Analysis of additional methods of diagnosis in patient with generalized periodontitis. Markers of bone resorption and formation. Differential diagnosis of generalized periodontitis.	4	3
4	General principles of treatment in patients with generalized periodontitis. Working out of treatment plan. Elimination of local irritants causing periodontal tissues destruction. Treatment of symptomatic gingivitis. Medications for local therapy of generalized periodontitis, prescription. Mechanism of action, methods of application depending on the form and course of gingivitis. Periodontal dressings, their types. Indications for their application.	4	3
5	Prosthetic treatment of generalized periodontitis. Methods of fixation of movable teeth. Temporary splinting. Traumatic occlusion, diagnostic methods. Correction of malocclusion. Indications. Antibiotic resistance Methods of conducting.	4	3
6	Surgical treatment of generalized periodontitis (curettage, gingivotomy, gingivectomy, flap surgery). Indications. Method of conducting	4	3
7	General pharmacotherapy of generalized periodontitis. Indications. Medications. Maintenance care.	4	3
8	Periodontosis. Etiology, pathogenesis. Clinic, diagnosis, treatment. Methods of treatment of teeth hyperesthesia. Peculiarities of the periodontal treatment of patients with general pathology	4	3
9	Tumors of the periodontium. Clinical Mistakes and complications in the diagnosis and treatment of periodontal diseases. features.	4	3
10	Organization of physiotherapeutic department. Indications, contraindications for the use of physiotherapeutic treatment. Types of physiotherapy.	4	3
11	Prophylaxis of periodontal diseases. Etiological and pathogenetical prophylactic measures. Dispensary system (for the prevention and treatment of periodontal diseases).	4	3
12	Organization and extend of dental care in military forces in peaceful conditions and during hostilities	4	3
	Total number of hours	48	51

OUT OF CLASS WORK

(51 hours)

№	Topic	Hours
1.	<u>Preparation for practical lessons</u> □ <u>theoretical and practical training.</u>	27
2.	<u>Working-out of practical topics not included in practical classes:</u>	
	1. Idiopathic diseases of the periodontal tissues.	4
	2. Tumors of the periodontal tissues. Clinical signs, diagnosis, treatment	4
	3. Treatment of gingival recession	4
	4. Methods of elimination of periodontal pockets	4
	5. Prosthetic local treatment. Occlusal adjustment, coronoplasty, splinting. Methods of conduction.	4

	6. Algorithms of individual hygiene of oral cavity in different conditions of periodontal tissues.	4
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CLINICAL COURSE

METHODS OF EXAMINATION OF A PATIENT

Diagnostics. Determination. Constituents of diagnostics, their content.

Diagnosis. Determination. Constituents of diagnosis, their content

Diagnosis in restorative dentistry. Sem(e)iotics and diagnostics of diseases in restorative dentistry.

Subjective and objective methods of examination of a patient. Peculiarities of examination of patients with dental diseases, periodontium and oral mucosa.

Subjective methods: complaints, case history, patient's life history, allergic history. Their significance for the diagnosis of the dental diseases, periodontium and oral mucosa. Objective methods of diagnosis: the main clinical and accessory – laboratory and instrumental with application of the modern diagnostic equipment (devices).

Additional methods of inspection in dentistry, PVT, X-ray (radiological), luminescent, and transluminescent testing. Diagnostic tests. Laboratory methods.

Medical stomatological papers (records). Outpatient case history - medical, scientific and legal document.

Anaesthesia in restorative dentistry, types, methods, means, indications to application. Aid in urgent cases.

DENTAL CARIES

Dental caries. Determination of notion. Epidemiology of dental caries: wide-spreadness (currency), intensity of caries, growth of intensity rate. Sketch map of epidemiological baseline study by WHO. Influence of environmental factors upon the currency and intensity of dental caries. The role of intrinsic causes in arisal and development of dental caries.

The frequency of caries-based damage of separate teeth. The role of microflora in dental caries development. Miller's theory as to the arisal of dental caries. Advantages and disadvantages. The significance of works of D.A. Entin, I.G. Lukomsky concerning problems of etiology and pathogenesis of caries.

Experimental caries. The main regularities of development and their significance for the clinic. The contribution of N.S. Nikitin, M.G. Bugayov, I.A. Behelman, A.Ye. Sharpenak as to the creation of the experimental model of caries.

Modern conceptions about the etiology and pathogenesis of caries. The cariogenic factors of general character, local cariogenic factors. The role of microorganisms in the development of caries.

Notion about the carioresistency of hard tissues of a tooth.

Pathologic anatomy of dental caries depending on the course of carious process due to the data of radiation, light, electronic and polarizable microscopy. Changes in the dental pulp in dental caries.

Dental caries classification due to clinico-anatomical and topographic signs of carious process, MKX -10(1998). Clinic, diagnosis, differential diagnosis of dental caries.

Treatment of dental caries. General treatment and local interventions into the foci of lesion depending on the stage of carious process. Remineralized therapy of dental caries. Surgical treatment of dental caries (filling). Anaesthesia in carious cavity preparation. Selection of materials for tooth filling taking into account the up-to-date dental materials and techniques. Peculiarities of deep caries treatment.

Physical factors in diagnosis and complex treatment of dental caries.

Errors and complications, arising during the treatment of dental caries, after the treatment. Errors and complications, arising in case of employment of composite materials.

DEPOSITS ON THE TEETH

Soft and hard deposits on the teeth (dental deposit, dental calculus (dental tartar). Types. Mechanism of formation, structure, chemical composition, causes of development. The role of saliva in deposit formation. The influence of deposits on dental caries development and periodontal diseases. Methods of removal. Set of instruments. Methods of dental calculus removal: mechanical, chemical, ultrasound.

Professional oral hygiene, assessment of its efficacy and significance in prophylaxis of dental diseases.

AFFECTION OF THE DENTAL HARD TISSUES OF NON-CARIOUS ORIGIN

Affection of teeth of non-cariou origin. Classification. Non-cariou affections that emerge before the tooth eruption. Hypoplasia. Hyperplasia of enamel. Endemic fluorosis of teeth. Classification after A.K. Nikolishyn (1989). Etiology, pathogenesis, clinic, diagnosis, differential diagnosis. Treatment. Methods of bleaching. Prophylaxis.

Affection of teeth of non-cariou origin that emerge after the tooth eruption: abrasion of dental hard tissues, wedge-shaped defect, enamel erosion, necrosis of dental hard tissues, dental trauma. Hyperesthesia of dental hard tissues. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prophylaxis.

Discolour(ing)s. Bleaching of teeth. Systematization of methods. Indications and contraindications for different types of bleaching.

Physical methods in diagnosis and treatment of non-cariou affections of teeth.

DISEASES OF THE PULP

Anatomical, histological and physiological properties of the pulp. The contribution of Ye.V.Kovalyov. Changes in the pulp as a result of ageing, general dental diseases.

Pulpitis. Determination of notion. Etiology. Pathogenesis. Pathologic anatomy of different forms of pulpitis. Classification of pulpitis after Yu. M.Gofung (1928), KMI (1964), MKX-10 (1998), their positive qualities and drawbacks. New modern methods of approach to classification of pulpitides. Systematization of methods of pulpitides treatment. Anaesthesia. Methods of complete and partial pulp salvation, indications, efficacy, possible complications. Characteristics of medicines. Methods of vital and devital extirpation of pulp, indications, efficacy, possible complications. Peculiarities of mechanical and medicamentous processing of root canals in the treatment of pulpitides. The filling of root canals, techniques, materials.

List of theoretical questions for control learning

„DISEASES OF THE TOOTH HARD TISSUES AND ENDODONTIUM”

1. How to start the examination of dental patient?
2. What belongs to the basic methods of examination?
3. How to divide the face to determine its proportionality?
4. What is palpation? What types of palpation do you know?
5. Specify the circuit diagnostics of lymphadenopathy.
6. What are the signs of the oral mucosa in normal condition?
7. What is the thermal test? What changes in the pulp are typical of the lack of response to thermal stimuli?
8. What kind of bite attributed to physiological and pathological?
9. What should you look for during the examining of oral cavity?
10. What methods of examination can establish the final diagnosis?
11. What is the purpose of EPT usage?
12. What indicators of electric current power are typical for intact tooth?

13. What is the procedure of EPT?
14. What are the different types of radiological examinations?
15. What for the panoramic radiography is carried out?
16. What is the visual-tactile method of caries diagnostics?
17. What is the coloring test? What are the dyes used for this technique?
18. What about the resistance of enamel to acids means?
19. What is the TER-test methods?
20. Specify extra instrumental methods of diagnostics of caries.
21. In what cases, diagnosis of caries is carried out using the PluraFlex apparatus?
22. What is the principle of work of "DiagnoDent" apparatus?
23. What is the medical card of dental patient?
24. What sections contain the medical card of dental patient?
25. Why the medical card of dental patient is a legal document?
26. Why the medical card of dental patient is the subject of research?
27. What is the objective examination of the patient?
28. What is a subjective examination of the patient?
29. What examination refers to additional methods of examination?
30. How to mark the dental formula according to recommendations of the World Health Organization and the International Federation of Dentists?
31. What is written in the "Diary of treatment"?
32. What is written in the "Epicrisis"?
33. What are the different types of dental plaque?
34. What is the mechanism of formation of soft and hard plaque?
35. The microflora of dental plaque.
36. Clinical methods of determining of dental plaque.
37. Hygienic indexes and interpretation of their scores
38. Ultrasonic removal of dental plaque. Features of work.
39. Sandblasting removal of dental plaque. Features of work.
40. Polishing of hard tooth tissues. Techniques and materials.
41. How can you reduce pain during the preparation?
42. What are the methods of anesthesia?
43. What is premedication? What methods can be used?
44. How to share the tools for topical anesthesia?
45. What types of anesthesia are referred to infiltration anesthesia?
46. Methods of infiltration anesthesia.
47. What are conducting anesthesia in the mandible?
48. What are conducting maxillary anesthesia?
49. What are the indications for the use of anesthesia in dental patients?
50. What is anaphylactic shock?
51. Forms of anaphylactic shock.
52. The causes of anaphylactic shock.
53. First aid in case of anaphylactic shock.
54. Syncope, first aid
55. Collapse, first aid.
56. Hypertension crisis, first aid.
57. Anesthetic intoxication, first aid.
58. What is caries?
59. What indexes determine the epidemiology of caries?
60. What is the intensity of caries?
61. What is the increase of intensity of caries?
62. Clinical classification of dental caries.
63. Classification by the presence of caries complications.

64. Classification of cavities depending on their location (Black).
65. Generalized caries, acute caries - a short description.
66. As it varied with time understanding of the origin and development of caries?
67. What is the role of microorganisms in caries appearances?
68. What are the properties of saliva have caries protective value?
69. What are the factors of specific and non-specific protection in the oral cavity?
70. What are the general caries-genic factors?
71. What is the impact of somatic pathology on the origin and course of caries?
72. What is the importance of food consistency on the origin and course of caries?
73. What is the most informative method of assessment of morphological changes in initial caries?
74. What morphological areas are distinguished in caries in the stage of spot?
75. What are the main features of a region of demineralization at an initial caries?
76. What are the main causes of dark color in chronic initial caries.
77. What complaints have a patient in case of initial caries?
78. What can be observed during the objective examination in the case of an initial caries?
79. What additional diagnostic methods used to establish the final diagnosis?
80. With what other diseases have to be conducted the differential diagnosis of initial caries?
81. When remineralization therapy should be done?
82. What group of drugs uses for remineralization during the local treatment of initial caries?
83. What is the effect of fluoride in remineralization local therapy?
84. Name the fluoride preparations and methods for their use for the remineralization therapy.
85. What is a fissure sealing?
86. Specify the sealants. Requirements and methods of their use.
87. What is the treatment of initial chronic caries?
88. What is the micro abrasion?
89. What are the pathological changes in case of superficial caries?
90. What changes in the pulp are typical in case of superficial caries?
91. What complaints are typical for superficial caries?
92. To perform the differential diagnostics of superficial caries with initial caries.
93. To perform the differential diagnosis of superficial caries with enamel erosion.
94. To perform the differential diagnosis of superficial caries with enamel hypoplasia.
95. With what form of endemic fluorosis should be carried out the differential diagnosis of superficial caries?
96. What are the clinical signs of acute middle caries?
97. What are the clinical signs of chronic middle caries?
98. To conduct the differential diagnostics of middle caries and wedge-shaped defect.
99. To conduct the differential diagnostics of middle caries with chronic periodontitis.
100. What are the requirements for the cavity formation.
101. What are the requirements for the isolating liners.
102. What are the steps of cavities filling with composite materials.
103. What is the pain type in case of deep caries?
104. Describe the carious cavity in case of acute deep caries?
105. What are the objective differences between the cavities in acute and chronic deep caries?
106. The probing of walls and floor in chronic deep caries cavity is painless. Why?
107. What are the treatment peculiarities of acute deep caries?
108. How to share the medicines for treatment of deep caries?
109. What are the treatment differences between acute and chronic deep caries?
110. What is the medical tactic in case of generalized caries?
111. What is the data of objective examination of patients with secondary caries of endodontic treated tooth.
112. Methods of diagnosis of secondary caries.

113. Features of treatment of secondary and recurrent caries.
114. What mistakes and complications can arise during the cavity preparation?
115. Which manipulations are necessary in case of perforation of bottom of the caries cavity?
116. What mistakes and complications occur during the filling of cavity?
117. What complications can occur in case of improper imposition of insulating liner?
118. Which complaints have the patient in case of overestimation of cavity fillings?
119. The value of proper diet in the prevention of tooth decay.
120. What is the mechanism of anti caries action of fluoride?
121. Features of the application of fluoride remedies for the prevention and treatment of dental caries.
122. Sealing of fissures, types, indications and methods of application.
123. The role of oral hygiene in the prevention of tooth caries.
124. Varieties of hygiene products, features of their use.
125. Features of preventive measures in certain population groups - military, pregnant women, people with generalized caries and so on.
126. Classification of genetic lesions of hard tooth tissues.
127. Enamel hypoplasia.
128. The etiology of endemic fluorosis.
129. Classification of fluorosis.
130. Clinical forms of dental fluorosis.
131. Differential diagnosis of hypoplasia, fluorosis and dental caries.
132. Prophylaxis of dental fluorosis.
133. Treatment of teeth affected by fluorosis.
134. Teeth Whitening: types, methods, materials.
135. Causes and classification of pathological tooth abrasion.
136. Clinical causes and treatment of high abrasion of teeth.
137. The wedge-shaped defects of teeth, clinical signs, stage and phase of the disease.
138. Treatment of wedge-shaped teeth defects.
139. Erosion of teeth, etiology, clinical signs, diagnosis, treatment.
140. Necrosis of hard tooth tissue, etiology, types of necrosis.
141. Clinical signs and treatment of various types of hard tooth tissue necrosis.
142. Acute and chronic teeth trauma. Diagnosis, clinical signs and treatment.
143. Classification of teeth hyperesthesia.
144. Treatment methods of teeth hyperesthesia. Medication groups.
145. What is the dental pulp?
146. What layer of pulp is formed by odontoblasts?
147. What fibrous elements contained in the pulp?
148. What are the functions of pulp?
149. Protective function of pulp.
150. What are the age changes in the structure of pulp.
151. What kind of additional methods of examination have to be used for examination of patients with diseases of pulp?
152. List the irradiation zone of pain in case of pulpitis.
153. Classification of pulpitis.
154. What are the reasons that cause pulpitis.
155. What are the main methods of examination for diagnosis of pulpitis?
156. What kind of additional methods of diagnosis have to be used for diagnosis of pulpitis?
157. What are the pathological changes can be found in case of chronic forms of pulpitis?
158. Konkrementes and petrificates.
159. The mechanism of konkrements formation.
160. Diagnostics of konkremental pulpitis.
161. The ways of infection spreading into the pulp.

162. Classification of pulp diseases.
163. Types of anesthesia for the pulpitis treatment.
164. Justification of the treatment choice for patients with the diseases of the pulp.
165. Pastes that can be used for the treatment of patients with the diseases of the pulp.
166. The methods and tools that can be used for the bleeding stop from the root canal.
167. Modern painkillers.
168. Indications to the method of completely remove the pulp under the anesthesia.
169. Clinical signs of acute types of pulpitis.
170. Clinical signs of chronic types of pulpitis.
171. Types of solutions for processing of cavity and canals.
172. Materials used for sealing of root canals.
173. Differential diagnosis of pulpitis.
174. Endodontic instruments.
175. What is the periodontium?
176. Histological structure of periodontal tissues.
177. Peculiarities of collagen fibers orientation in the periodontal tissues and their function.
178. Cellular elements of periodontium.
179. What are the island of Malasse?
180. Peculiarities of periodontal blood supply.
181. Peculiarities of innervation of periodontium.
182. Functions of periodontium.
183. Classification based on the location of periodontal inflammation.
184. Classification of acute forms of apical periodontitis.
185. Classification of chronic forms of apical periodontitis.
186. Differential diagnosis of chronic apical periodontitis.
187. Radiodiagnosis of chronic apical periodontitis.
188. What kinds of additional methods of inspection have to be carried out for the diagnosis of chronic apical periodontitis?
189. What is traumatic periodontitis?
190. What kind of injuries can lead to traumatic periodontitis?
191. In what cases, there may be a reaction from the periosteum?
192. What is the extra oral examination of the patient with apical periodontitis complicated by acute purulent abscess?
193. What determines the location of subperiosteal abscesses?
194. Clinical signs of exacerbation of chronic apical periodontitis.
195. The characteristic of chronic granulating periodontitis.
196. The clinical sign and diagnosis of chronic granulomatous periodontitis.
197. The main principles of treatment of acute apical periodontitis.
198. The sequence of therapeutic procedures.
199. Peculiarities of treatment of apical periodontitis.
200. Characteristics of filling materials for the root canals obturation.
201. The main principles of treatment of acute apical periodontitis.
202. The sequence of therapeutic procedures.
203. What physiotherapy techniques can be used for treatment of apical periodontitis?
204. When can be used the physiotherapy?
205. The use of diathermocoagulation (coagulation).
206. Darsonvalization method, mechanism of action.
207. The mechanism of electrophoresis action.
208. The use of an electric field, mechanism of action.
209. Depoforesis method, mechanism of action.
210. Contraindications to the use of physiotherapy techniques.

**Matrix of competences of the educational component
Individual profile course of practical training "Therapeutic dentistry"**

Program competencies	Individual profile course of practical training "Therapeutic dentistry"
<i>General competences</i>	
ZK 1 Ability to abstract thinking, analysis and synthesis.	-
GC 2. Ability to learn and master modern knowledge.	+
GC 3 Ability to apply knowledge in practical activities.	+
GC 4 Knowledge and understanding of the subject area and understanding of professional activity.	-
GC 5 Ability to adapt and act in a new situation.	-
GC 6 Ability to make informed decisions.	-
GC 7 Ability to work in a team.	+
GC 8 Interpersonal skills.	-
GC 9 Ability to communicate in the state language both orally and in writing;	+
GC 10 Ability to communicate in a foreign language.	-
GC 11 Skills in using information and communication technologies.	+
GC 12 Determination and persistence in relation to assigned tasks and assumed responsibilities.	-
GC 13 The ability to act socially responsibly and consciously.	-
GC 14 The desire to preserve the environment	-
GC 15 The ability to act on the basis of ethical considerations	-
<i>Professional competences</i>	
PC 1 Ability to collect medical information about the patient and analyze clinical data.	+
PC 2 The ability to interpret the results of laboratory and instrumental research.	+
PC 3 Ability to diagnose: determine preliminary, clinical, final, concomitant diagnosis, emergency conditions.	+
PC 4 The ability to plan and carry out measures for the prevention of diseases of the organs and tissues of the oral cavity and maxillofacial area.	+
PC 5 The 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.	+
PC 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 area.	-
PC 7 The ability to determine the management tactics of patients with diseases of organs and tissues of the oral cavity and maxillofacial area with concomitant somatic diseases.	+
PC 8 Ability to perform medical and dental manipulations.	-
PC 9 The ability to treat the main diseases of the organs and	+

tissues of the oral cavity and maxillofacial area.	
PC 10 Ability to organize and carry out medical evacuation measures.	-
PC 11 Ability to determine tactics, methods and provision of emergency medical assistance.	-
PC 12 Ability to organize and conduct a screening examination in dentistry.	-
PC 13 The ability to assess the impact of the environment on the state of health of the population (individual, family, population).	-
PC 14 Ability to maintain regulatory medical documentation.	+
PC 15 Processing of state, social and medical information.	-
PC 16 Ability to organize and carry out rehabilitation measures and care for patients with diseases of the oral cavity and OMF.	-
PC 17 The ability to legally secure one's own professional activity.	-
PC 18 The ability to provide pre-medical care according to the protocols of tactical medicine.	-

**Detailing of competencies according to NQF descriptors in the form of "Competence Matrix".
Competence matrix**

№	Competence	Knowledge	Skills	Communication	Autonomy and responsibility
Integral competence:					
Ability to solve complex problems and problems in the field of health care in the specialty "Dentistry" in a professional activity or in the learning process, which involves research and / or innovation and is characterized by uncertainty of conditions and requirements					
General competencies					
1.	Ability to abstract thinking, analysis and synthesis; ability to learn and be modernly trained.	Know the current trends in the industry 22 "Health" and the indicators that characterize them .	Be able to analyze professional information, make informed decisions, acquire modern knowledge to improve the activities of a dentist. Be able to analyze professional information, make informed decisions, acquire modern knowledge to improve the activities of a dentist.	Establish appropriate communication links to achieve goals.	Be responsible for the timely acquisition of modern knowledge. Lifelong learning.
2.	Knowledge and understanding	Know the features of the professional activity of a dentist.	Be able to carry out professional activities that require updating and integration of knowledge.	To form a communication strategy in professional activity.	Be responsible for continuous professional development with a high level of autonomy.
3.	Ability to apply knowledge in practical situations.	Know the methods of implementing knowledge in solving practical problems of the professional activity of a dentist.	Be able to use professional knowledge to solve practical problems.	Establish links with the subjects of practical activities.	Be responsible for the validity of decisions.

4.	Ability to communicate in the state language both orally and in writing. Ability to communicate in another language.	Know the state language, including professional orientation. Know a foreign language at a level sufficient for professional communication.	Be able to use the state language and a foreign language for professional activities and communication.	Use language skills in the professional activity of a dentist.	Be responsible for the continuous improvement of knowledge of state and foreign languages.
5.	Skills in the use of information and communication technologies.	Have modern knowledge in the field of information and communication technologies used in professional activities.	Be able to use information and communication technologies in the professional field, which requires updating and integration of knowledge.	Use information and communication technologies to establish communication links.	Be responsible for the continuous development of professional knowledge and skills.
6.	Ability to search, process and analyze information from various sources.	Know the algorithm for searching, processing and analyzing information from various sources in the specialty 221 "Dentistry".	Be able to use the algorithm of search, processing and analysis of information from various sources in the professional activity of a dentist.	Use up-to-date information to establish communication links.	Be responsible for the continuous search, processing and analysis of information from various sources in order to improve professional activities.
7.	Ability to adapt and act in a new situation;	Know the methods of implementing knowledge in solving practical	Be able to use professional knowledge to adapt and act in a	Establish links with the subjects of practical activities.	Be responsible for the quality of professional tasks in the new
	ability to work autonomously	problems in new conditions.	new situation.		situation.
8.	Ability to identify, set and solve problems.	Know how to implement the knowledge in identifying, formulating and solving the problems of professional activity of a dentist.	To be able to use knowledge to identify, set and solve problems of professional activity.	Establish links with the subjects of practical activities in order to identify, set and solve problems of professional activity.	Responsibility for the validity of the decisions made on the solution of problems of professional activity.

9.	Diligence in selecting a communication strategy.	Know how to implement a strategy for communicating with patients and colleagues.	Be able to use the knowledge to choose a strategy for communication with patients and colleagues.	Be able to use the knowledge to choose a strategy for communication with patients and colleagues.	Be responsible for choosing a communication strategy with patients and colleagues.
10.	The willingness to work as part of a team.	Know how to interact collectively when working in a team.	Know how to work together productively during teamwork.	Formulate the capacity for professional communication during teamwork.	Be personally responsible for contributing to the team's work.
11.	Interpersonal skills and interpersonal communication.	Know how to communicate with colleagues and patients in an interpersonal way.	Be able to use the knowledge to choose a communication strategy for inter-relationship interaction.	Formulate a communication strategy in professional activities.	Be responsible for continuous professional development.
12.	The commitment to act on the basis of ethical considerations (motives).	Know the moral and ethical principles of the medical specialist and the rules of professional subordination.	Use in practice the moral and ethical principles of the medical specialist and the rules of professional subordination.	To respect the moral and ethical principles of the medical professional and the rules of professional subordination during professional activities.	To be personally responsible for upholding the moral and ethical principles of the medical specialist and the rules of professional subordination.
13.	Skills to carry out safe work.	The ability to assess the level of risk in the performance of professional tasks.	Be able to carry out professional activities in compliance with safety regulations.	Ensure that professional work is carried out in a professional manner work in compliance with safety rules.	To be personally responsible for complying with safety rules when carrying out professional tasks.
14.	The performance of the work must be evaluated and the quality of the work carried out must be ensured.	The competence to assess and ensure quality in the performance of professional tasks.	Know the methods for assessing performance indicators.	Establish communication links to ensure the quality of work.	Be personally responsible for ensuring the quality of professional performance professional activity.

15.	A commitment to the preservation of the natural environment.	The capacity to assess the state of the environment.	To be able to analyse indicators of the quality of the environment, to take part in measures to preserve and improve it.	Use communicative communication to improve efficiency and conservation of the environment. Environmental protection.	To be personally responsible for the environmental protection rules in the performance of professional tasks.
№	Competence	Knowledge	Skills	Communication	Autonomy and responsibility
<i>Special competences</i>					
1.	Gathering medical information about the patient's condition.	Know the algorithm for collecting medical information about the patient's condition by the dentist at the therapeutic appointment.	Know how to describe and identify the main problems, assess the general condition and determine the patient's dental status.	Adhere to ethics, bioethics and deontology during the anamnesis.	To be responsible for the good performance of the tasks assigned.
2.	Evaluating the results of	Structure of hard tissues of the	Evaluate the condition of the	Be able to explain and	Be responsible for the

	laboratory and instrumental investigations.	tooth, pulp, periodontium, organs and mucous membrane of the cavity, changes in them, associated with age and pathological conditions. Clinical and anatomical features of the structure of teeth, signs of relevance to the appropriate slit, sides. Biochemical, microbiological composition of plums, oral fluid, their biophysical properties and remineralizing potential. Methods for determining the length of the root canal.	teeth, periodontium, organs and mucous membrane of the mouth. Determine whether the teeth belong to the same group, side (right, left), upper or lower slit. Evaluate and interpret the results of biochemical, biophysical, microbiological examinations of the oral mucosa and its remineralising properties. Evaluate the color, the condition of the tooth tissue in normal conditions, demineralization , etc. To determine the length of the root canal using various methods.	explain the changes in the condition of the teeth, periodontium, organs and mucous membranes of the mouth, the mucosa of the mouth and the oral cavity to the patient and colleagues.	correctness and accuracy of the evaluation of laboratory and instrumental methods of investigation.
3.	Establishing a clinical diagnosis of a dental disease.	1. Have specific knowledge of the diagnostics of dental diseases specified by the standard of higher education. 2. Classification of carious	1. Identify and identify the main clinical symptoms and syndromes, using the patient's history, examination data, knowledge	Establish communication links to ensure the quality of the diagnostic process.	Be responsible for the results of the diagnosis of dental disease. Be responsible for providing the appropriate knowledge and skills.

		<p>diseases according to Blek.</p> <p>3. Clinical features of the anatomic and histological structure of the teeth.</p> <p>4. Topography of dental tissues and structures.</p> <p>5. Dental formulas.</p>	<p>of the human body, its organs and systems, and establish the initial clinical diagnosis of the dental disease.</p> <p>2. Determine whether the carious lesions belong to a certain class according to Blek.</p> <p>3. Evaluate the extent of carious damage, dental tissues condition.</p> <p>4. Mark the teeth with different dental formulas.</p>		
4.	Diagnosis of non-critical conditions.	Diagnosis of non-critical conditions at a dental appointment.	Have specialised knowledge of the diagnosis of non-injurious conditions as defined by the Higher Education Standard.	Perform diagnosis of non-injurious conditions according to standard schemes.	Determine tactics for emergency medical care according to the algorithm.
5.	Planning and carrying out preventive measures against dental diseases.	<p>To know the principles of prevention of dental diseases and their complications.</p> <p>Knowledge of the basic principles of hygienic education and education of the population.</p>	<p>Be able to plan measures to prevent the spread of dental diseases and evaluate their effectiveness.</p> <p>Plan primary and secondary prevention of the most common dental diseases in children of different ages.</p>	Be able to explain and substantiate the principles of prevention of dental diseases and their complication to the patient, colleagues.	To be responsible for the correctness and accuracy of dental disease prevention measures.

			Carry out prophylactic measures for the main dental diseases.		
6.	The nature and principles of the treatment of dental diseases.	Knowledge of algorithms for determining the nature and principles of treatment of dental diseases of the therapeutic patients.	To be able to practically use treatment protocols to determine the nature and principles of the treatment of therapeutic patients.	Be able to explain and justify the choice of treatment principles for dental diseases to the patient, colleagues.	To be responsible for the correctness and accuracy of the treatment of dental diseases.
7.	Identification of the necessary working and resting regimen, diet in the treatment of dental diseases.	To commit to healthy lifestyles, personal hygiene and to implement them in health care practices.	To be able to analyse the health status of a given population, based on official data, by comparing it with statistical averages. Based on data on environmental conditions, foodstuffs, leisure and work regime, the health status of the contingent, identify the link between them.	Establish communicative links to ensure a good working and rest time regime, diet in the treatment of dental diseases.	To be responsible for ensuring that you have the appropriate knowledge and skills for the work and rest time regime, diet in the treatment of dental diseases.
8.	Performing medical and dental procedures.	1. Methods and techniques for the treatment of various classes of cavities according to Black. 2. Composition, properties, indications for the use of filling materials for permanent and	1. Repeat the treatment of carious cavities in different ways with classic and minimally invasive techniques. 2. Fill carious cavities of	Be able to select methods and carry out individual treatment steps in a well-grounded manner.	To be responsible for the acquisition of relevant knowledge and skills.

			grades I to V according to		
		temporary fillings, treatment pads and techniques for their use. 3. Clinical peculiarities of the structure of the cavity of the tooth and root canals. 4. Composition, properties, indications for the use of root canal filling materials (sealers and fillers).	Black with materials of different groups. 3. Trepanning of crowns of teeth of different groups, amputation, pulp extirpation, removal of cavities, instrumental and medicamentous treatment of root canals and their filling by different methods and groups of sealers for the purpose.		
9.	The treatment of basic dental diseases.	Knowledge of protocols for the treatment of dental diseases of patients in the therapeutic area with odontopathology.	To be able to practically apply treatment protocols in dental patients with a therapeutic profile.	Know how to explain and justify the treatment of dental diseases to the patient, colleagues.	Be responsible for the treatment of general dental patients with odontopathology
				accurately.	

Learning outcomes:

Integral and final programme learning outcomes, which are shaped by the discipline: Completion of "medical practice" forms the basis for the formation of further practical part of the program results of training in accordance with the standard of higher education of Ukraine for undergraduate training of specialists of the second (master) level specialty 221 "Dentistry:

1. Gather information about the general state of the patient, assess the psychomotor and

physical development of the patient, the condition of the palpebral-facial area, based on the results of laboratory and instrumental examinations to evaluate the information about the diagnosis.

2. Identify and identify the leading clinical symptoms and syndromes; using standard methods, using the previous history of the patient, examination of the patient, knowledge of the person, its organs and systems, establish a virogynous nosological preliminary clinical diagnosis of dental disease.

3. Recognize and analyze laboratory, functional, and/or instrumental examinations of patients with dental disease for differential diagnosis of diseases.

4. Establish a residual clinical diagnosis according to appropriate ethical and legal standards by rendering an informed decision and logical analysis of the obtained subjective and physical findings, Additional examinations, differential diagnostics under the supervision of a medical supervisor in a treatment setting.

5. Determine the diagnosis of non-disabling conditions in the treatment setting.

6. Plan and implement preventive measures of dental diseases in the population to prevent the spread of dental diseases.

7. To analyse epidemiological state and conduct mass and individual, general and local medical and non-medicinal prophylaxis of dental diseases.

8. Determine the nature of treatment of dental disease by taking an informed decision according to the current algorithms and standard schemes.

9. Determine the nature, principles of the work regime, rest and necessary diet in the treatment of dental diseases on the basis of the previous or residual clinical diagnosis.

10. To carry out treatment of the main dental diseases according to the current algorithms and standard schemes under the control of the medical supervisor in the conditions of the treatment facility.

11. Analyse and evaluate public, social and health information using standard approaches and computer-based information technology.

12. Evaluate the impact of the environment on the health of the population in the medical institution according to standard methods.

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

14. Analyze and evaluate government, social and medical information using standard approaches and computer information technologies.

15. Assess the impact of the environment on the state of health of the population in the conditions of a medical institution according to standard methods.

16. To form goals and determine the structure of personal activity based on the result of the analysis of certain social and personal needs.

17. Follow a healthy lifestyle, use self-regulation and self-control techniques.

18. To be aware of and be guided in one's activities by civil rights, freedoms and duties, to raise the general educational cultural level.

19. To comply with the requirements of ethics, bioethics and deontology in their professional activities.

20. To organize the necessary level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity.

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

22. Perform medical dental manipulations on the basis of a preliminary and/or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 7).

23. Perform emergency medical aid manipulations using standard schemes under any circumstances based on the diagnosis of an emergency (according to list 4) in limited time (according to lists 6, 7).

PROGRAM LEARNING OUTCOMES

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
OD 27.3	+	+	+	+	+	+	+	+	+	+	+	-	+	-	-	-	-	-	+	+	+	+	+

Upon completion of Therapeutic dentistry, Periodontology students will be able to know:

- clinical features of anatomic and histological structure of teeth, periodontium, mucous membrane and mouth cavity organs;
- Basic methods of examination of dental patients;
- Clinical signs of dental diseases of hard tissues and periodontium;
- Basic clinical and biochemical indices of the human organism biologic standards;
- Principles of differential diagnostics of dental diseases;
- Principles and stages of treatment of dental diseases;
- Types, levels and prophylactic measures for diseases of the oral cavity;
- Tactics, algorithms of emergency medical aid at dental appointments. skills:

- Carry out examination of a dental patient;
- establish and formulate the initial diagnosis;
- Carry out the differential diagnosis;
- Analyze the results of the examination of the patient;
- Make a clinical diagnosis of the main diseases;

- Detect and identify manifestations of somatic diseases in the oral cavity.

Methods of control

Each theme of the thematic module is estimated in accordance with the 4-grade assessment criteria (traditional scale), later the marks are converted into grades. The summary report makes it possible for the evaluators to assess the student's activities in the proper way (max.- 120 gr., min.- 72 gr.), and grades for the differentiated control (max. - 80 gr., min. - 50gr.).

Determination of the number of grades that a student earn from discipline.

Assessment of the discipline is the result of the current study of student and calculated in grades, according to Table1.

Grades by discipline converted in scale of ECTS and scale of traditional marks. The grades of ECTS scale not converted in scale of traditional marks and vice versa. Grades of students, which study in specialty, converted on a scale ECTS as follows:

The convertation of estimations in rating scale into the scale of progress in studies ECTS

Estimation of ECTS	Statistical index	Description	Limits of estimations of ECTS
A	The best 10%	Excellent	191-200
B	Next followings 25%	Very good	166-190
C	Next followings 30%	Good	136-165
D	Next followings 25%	Satisfactory	111-135
E	The last 10%	Acceptably	101-110
Fx	Repeated handing over	Unsatisfactory	
F	Obligatory repeated course of studies	Unsatisfactory, with the repeated course of studies	

Grades of discipline	4-th point traditional marks
From 170 to 200 grades	5
From 140 to 169 grades	4
From 139 to minimal numbers of grades	3
less than the minimum number of grades	2

A list of practical skills to be acquired by the four-year student at the faculty of dental

Anatomical-physiological characteristic of periodontal tissues. Dento-gingival junction.

Clinical methods of periodontal disease diagnosis.

Classification of the periodontal diseases.

Papillitis. Etiology, pathogenesis, clinic, diagnosis, treatment.

Simple gingivitis. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment.

Hypertrophic gingivitis. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis.

Ulcerative-necrotic gingivostomatitis (Vincent). Etiology, pathogenesis, clinic, differential diagnosis, treatment.

Medications in gingivitis treatment. Varieties of physiatrics methods in periodontology.

Periodontitis. Classification, main syndromes, diagnostic.

The role of endogenic factors in the pathogenesis of the periodontitis.

The main and additional methods in the diagnostic of periodontal diseases.

Criteria for the estimation of periodontal condition (State).

Periodontal pocket. Mechanism of development, elimination methods.

Local periodontitis. Etiology, pathogenesis, clinic, differential diagnosis, treatment principles.

Scheme of complex periodontitis treatment.

Methods of dental calculus removing.

Close method of periodontal inflammatory diseases treatment. Periodontal dressings, their types.

Local antiinflammatory therapy of chronic generalized periodontitis.

Methods of occlusal determination and adjustment. Temporary splinting in the treatment of periodontal diseases.

Closed curettage of periodontal pockets

Periodontosis. Etiology, pathogenesis. Clinic, diagnosis, treatment.

Methods of teeth splinting.

Periodontal disease prevention.

The role of oral hygiene in the pathogenesis of periodontal diseases.

Anatomical-physiological characteristic of periodontal tissues. Dento-gingival junction.

Clinical methods of periodontal disease diagnosis.

Classification of the periodontal diseases.

Papillitis. Etiology, pathogenesis, clinic, diagnosis, treatment.

Simple gingivitis. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment.

Hypertrophic gingivitis. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis.

Ulcerative-necrotic gingivostomatitis (Vincent). Etiology, pathogenesis, clinic, differential diagnosis, treatment.

Medications in gingivitis treatment. Varieties of physiatrics methods in periodontology.

Periodontitis. Classification, main syndromes, diagnostic.

The role of endogenic factors in the pathogenesis of the periodontitis.

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Criteria for evaluation of practical skills:

- implementation of practical skills **without mistakes - 5 points,**
- implementation of practical skills **with individual mistakes corrected by a student - 4 points**
- implementation of practical skills **with individual mistakes, corrected by the teacher - 3 points**
- **failed practical skills - 0 points**

ASSESSMENT OF STUDENTS WORK

№	A list of practical skills			
1.	Work with medical documentation. Filling in and maintaining outpatient dental history.			
2.	Estimation of hygiene indices.			
3.	To conduct the clinical examination of patients with periodontal pathology: - complaints - anamnesis - extraoral examination - intraoral examination			

	<ul style="list-style-type: none"> - percussion - palpation - mobility 			
4.	<p>To conduct additional methods of dental examination</p> <ul style="list-style-type: none"> - Evaluation of the hygienic condition of oral cavity - Thermal test - Colour tests with dyes - electroodontodiagnosis 		3	
5	Radiological methods of examination		3	
6.	To analyse bacteriological tests		3	
7.	To carry out supra-gingival scaling and polishing of teeth surfaces		3	
8.	To measure teeth mobility		3	
9.	To carry out sub-gingival scaling and polishing of teeth root surfaces		3	
10.	To perform instillation of medications into periodontal pockets		3	
11.	To perform application of medications on the gums		3	
12.	To perform sub-gingival irrigation		3	
13.	Preparation of non-hardening periodontal dressing		3	
14.	Preparation of hardening periodontal dressing		3	
15.	Oxygen therapy in ulcerative gingivitis		3	

16.	Treatment of hypertrophic gingivitis		3 - 5
17.	Treatment of the periodontal abscess		3 - 5
18.	Filling of the periodontal chart		3 - 5
19.	To provide occlusal adjustment.		3 - 5
20.	To conduct the procedure of closed curettage.		3 - 5
21.	To conduct extra-dental teeth splinting.		3 - 5
22.	To conduct intra-dental teeth splinting		3 - 5
23.	To conduct remineralisation therapy of exposed teeth roots		3 - 5
24.	To conduct professional oral hygiene		3 - 5
	Total points for performing practical skills		

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1. Atlas of microanatomy of organs of oral cavity of /L.A. Lutsik, V.F. Makeev, A.M. Yashchenko, O.E. Zavadka, Yu.V. Makeeva, Yu.Ya. Kryvko.– Lviv: Nautilus, 1999.– 208 p.

2. Nikolysyn A.K. Therapeutic dentistry /A.K. Nikolysyn: a textbook for the students of dental faculties of higher medical educational establishments of IV level of accreditation in two volumes, T.I.– Poltava: Divosvit, 2005.– 392 p.
3. Dmitrieva AA. Therapeutic dentistry.(M.: Medpress-inform, 2003.) 896 p.
4. Pediatric dentistry (Editor prof. L.O. Khomenko).(K.: Book plus, 1999.)524 p
3. Therapeutic dentistry (Editor Yu.M. Maksimovskij).– M.: Medicine, 2002.– 640 p.
4. TJames B. Summitt, J. William Robbins, Richard S. Schwartr. Fundamentals of operative dentistry. □ Quintessence Publishing. □ 2001
5. Brad W. Neville, Duglas D. Damm, Carl M. Allen, Jerry E. Bouquot. Oral and Maxillofacial Pathology. W.B. Saunders Company, 2002.

INFORMATION RESOURCES

1. Official website of Danylo Galycky Lviv National Medical University:
<http://www.meduniv.lviv.ua/>
2. Electronic information resources of University Library:
 - Library Catalogue.
 - Briefing sources: encyclopedias, reference books, dictionaries.
 - Educational electronic publications and resources: Materials containing systematized material within the framework of the course.
3. Information in the internet:
 - <http://bookmed.by/stomatologiya/propedevtika-stomatologicheskikh-zabolevanij-skorikova-l-a.html>
 - http://dentalss.org.ua/load/kniga_stomatologia/obshhaja_stomatologija/propedevtika_stomatologicheskikh_zabolevanij/6-1-0-422
 - <http://www.library.gov.ua/novi-nadkhodzhennia/stomatolohiia-eds-m-m-rozhok-liber-2/802-stomatolohiia-eds-m-m-rozhok-liber-2>
 - <http://www.booksmed.com/stomatologiya/153-terapevticheskaya-stomatologiya-borovskij.html>
 - http://stom.at.ua/load/ehlektronnye_knigi/terapevticheskaja_stomatologija/5
 - <http://www.stomatkniga.ru/>
 - <http://fb2.booksgid.com/medicina/76513-k-kapustin-stomatologiya.html>