

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
State Higher Educational Establishment "Uzhhorod National University"
Faculty of Dental Medicine

APPROVED

Dean _____
Dr.Sc Prof. Kostenko Y.Y.
«28» August 2019 y.

CURRICULUM AND PROGRAM
cycle of specialization in the specialty "Orthodontics"
(duration - 1560 hours)

Department Pediatric Dentistry

Uzhhorod - 2019

Work program "Orthodontics" for dentists in the direction of training: 1201 -
"Medicine", specialty 7.120010005, "Dentistry" – 57p.

Developers: **Klitynska O.V.**, Head of the Department Pediatric Dentistry, Doctor
of Medical Sciences, Professor; **Borodach V.O.** Associate Professor of Pediatric
Dentistry, Ph.D.

The work program was approved at the meeting of the Department Pediatric
Dentistry

Protocol of «__28__» August __ 2019 y. № __1__

Head of the Department Pediatric Dentistry,
Doctor of Medical Sciences, Professor;



Klitynska O.V.

«__28__» August __ 2019 y.

Approved by the Methodological Commission of the Dental Faculty in the direction
of preparation 7.12010005 "Dentistry"

Protocol of «__28__» August __ 2019 y. № __1__

Chairman of the Methodological Commission
Faculty of Dental Medicine



Prof. Klitynska O.V.

«__28__» August __ 2019 y.

COMPOSITION OF WORKING GROUP:

1	Klitynska O.V.	Doctor of Medical Sciences, Professor, Head of the Department Pediatric Dentistry
2	Kostenko Y.Y.	Doctor of Medical Sciences, Professor of the Department of Orthopedic Dentistry
3	Borodach V.O.	Candidate of Medical Sciences, Associate Professor of Pediatric Dentistry
4	Tsukanov D.V.	Candidate of Medical Sciences, Associate Professor of Pediatric Dentistry
5	Kornienko L.V.	Candidate of Medical Sciences, Associate Professor of Pediatric Dentistry
6	Pyndus T.O.	Doctor of Medical Sciences

EXPLANATORY NOTE

cycle of specialization in the specialty "Orthodontics"

Specialization cycle in the specialty "Orthodontics", the duration of which is 10 months (1560 hours) is carried out to obtain the qualification of a doctor of specialist in orthodontics for dentists who have passed an internship in the specialty "Dentistry" or other specialty of the dental profile and change it.

The main educational and educational goal of the cycle is to educate highly qualified orthodontic physicians who would have diverse academic basic theoretical background and have adequate, sufficient clinical experience. During the course of the cycle, a specialist in orthodontics should learn to think clinically independently, taking into account the peculiarities of etiology, pathogenesis, clinics, diagnostics, and performed measures for the prevention and treatment of dental and maxillofacial anomalies and deformities in different age periods.

As a result of theoretical (55% of teaching time) and practical (45% of teaching time) training, the students of the cycle will become acquainted with

modern diagnostic manipulations and master the newest methods of prevention and treatment of dental anesthesia. The cycle syllabus consists of 13 sections of the main program:

1. Education of dental and orthodontic health. Organization of orthodontic care (46 h).
2. Anatomical and biological basics in orthodontics (116 h).
3. Prevention of dentoalveolar anomalies (66 h).
4. Diagnostics in orthodontics (342 h).
5. Orthodontic appliances (72 h).
6. Orthodontic laboratory equipment and materials (137 h).
7. Basics of orthodontic treatment with fixed orthodontic technique and locking fixation (56 h).
8. Anchor support in orthodontics (16 h).
9. Clinical orthodontics. Etiology, pathogenesis, clinical representation, diagnostics and treatment of tooth-jaw system's anomalies: individual teeth anomalies, anomalies of tooth position, anomalies of dentition's shape and size, bite anomalies (198 h).
10. Features of teeth and dentition's prosthetic treatment during temporary, mixed and permanent bite (88 h).
11. Modern prosthetic methods and measures used for the treatment of traumatic teeth and jaw bones alterations among children (66 h).
12. Collaboration of the orthodontist in the complex of multidisciplinary approach for the treatment of tooth-jaw anomalies (291 h).
13. Standards for the clinical interventions during congenital malformations of the face and jaws (40 h).

and 4 additional sections:

1. Organization of emergency medical help for the population during emergency situations (12 h).
2. Tuberculosis (7 h).
3. Exceptionally dangerous infections (5 h).
4. Radiation medicine. (3 h).

The hours required for different types of knowledge control in the curriculum are not specifically allocated, but are included in the training hours set aside for seminars and practical classes. Depending on the contingent of students, their preparedness and other factors, curriculum changes may be within 10-15% of the total curriculum of a given cycle. The list of literature, provided at the end of

the program, contains modern domestic and foreign literature in the specialty, in particular scientific works published by the staff of the department, and related disciplines. After completing the training load stipulated by the program, doctors who have studied on the cycle are certified for the title of specialist doctor in the field of "Orthodontics".

Listeners who have received a positive grade in computer-based testing using a licensed "Elex" program and exam will receive a sample certificate.

CURRICULUM

of the specialization cycle in the specialty "Orthodontics"

Duration of the studying – 10,0 months (1560 hours).

Educational and disciplinary cycle's objectives – education of highly qualified orthodontic specialists, who would have versatile academic theoretical background and adequate sufficient clinical experience.

Attendance of the students: dentists who have completed an internship by the specialty “Dentistry” or other specialty of the dental profile and would like to change it.

Code of the course	Name of the course	Amount of study hours			
		Lectures	Self-study classes	Online-webinars	Total
1.	Education of dental and orthodontic health. Organization of orthodontic care.	2	42	2	46
2.	Anatomical and biological basics in orthodontics.	12	72	32	116
3.	Prevention of dentoalveolar anomalies.	12	36	18	66
4.	Diagnostics in orthodontics.	44	102	196	342
5.	Orthodontic appliances.	10	24	38	72
6.	Orthodontic laboratory equipment and materials.	8	22	102	137
7.	Basics of orthodontic treatment with fixed orthodontic technique and locking fixation.	6	32	18	56
8.	Anchor support in orthodontics.	2	14	0	16
9.	Clinical orthodontics. Etiology, pathogenesis, clinical representation, diagnostics and treatment of tooth-jaw system's anomalies: individual teeth anomalies, anomalies of tooth position, anomalies of dentition's shape and size, bite anomalies.	16	88	74	198
10.	Features of teeth and dentition's prosthetic treatment during temporary, mixed and permanent bite.	4	42	32	88
11.	Modern prosthetic methods and measures used for the treatment of traumatic teeth and jaw bones alterations among children.	10	36	20	66
12.	Collaboration of the orthodontist in the	18	178	65	291

	complex of multidisciplinary approach for the treatment of tooth-jaw anomalies.				
13.	Standards for the clinical interventions during congenital malformations of the face and jaws.	6	10	24	40
	Exam	0	0	6	6
	TOTAL	150	698	627	1540
1.	Organization of emergency medical help for the population during emergency situations.	6	0	6	12
2.	Tuberculosis.	0	0	2	2
3.	Exceptionally dangerous infections.	0	0	4	4
4.	Radiation medicine.	0	0	2	2
	Total	156	698	706	1560

**Thematic plan of lectures of the cycle of specialization in the specialty
"Orthodontics"**

Course code	Course title	Lectures (hour)
1.	Education of dental and orthodontic health. Organization of orthodontic care.	2
2.	Anatomical and biological basics in orthodontics.	12
3.	Prevention of dentoalveolar anomalies.	12
4.	Diagnostic in orthodontics.	44
5.	Orthodontic appliances.	10
6.	Orthodontic laboratory equipment and materials.	8
7.	Basics of orthodontic treatment with fixed orthodontic technique with locking fixation.	6
8.	Anchor support in orthodontics.	2
9.	Clinical orthodontics. Etiology, pathogenesis, clinic, diagnosis and treatment of anomalies of the dento-mandibular system: individual teeth, position of teeth, shape and size of the dentition, bite.	16
10.	Features of prosthetics of defects of teeth and dental rows in temporary, variable and permanent occlusion.	4
11.	Modern methods and means of orthopedic treatment of traumatic damage of teeth and jaw bones in children.	10
12.	Collaboration of an orthodontist in a multidisciplinary approach to the treatment of dental maxillary abnormalities.	18
13.	Standards for clinical intervention in congenital malformations of the face and jaws	6
	TOTAL	150
1.	Organization of emergency medical assistance to the population in emergency situations.	6
	TOTAL	156

**Thematic plan of practical training for the cycle of specialization in the
specialty "Orthodontics"**

Course code	Course title	Practical (hours)
1.	Education of dental and orthodontic health. Organization of orthodontic care.	42
2.	Anatomical and biological basics in orthodontics.	72
3.	Prevention of dentoalveolar anomalies.	36
4.	Diagnosis in orthodontics.	102
5.	Orthodontic appliances.	24
6.	Orthodontic laboratory equipment and materials.	22
7.	Basics of orthodontic treatment with fixed orthodontic technique with locking fixation.	32
8.	Anchor support in orthodontics.	14
9.	Clinical orthodontics. Etiology, pathogenesis, clinic, diagnosis and treatment of anomalies of the dento-mandibular system: individual teeth, position of teeth, shape and size of the dentition, bite.	88
10.	Features of prosthetics of defects of teeth and dental rows in temporary, variable and constant occlusion.	42
11.	Modern methods and means of orthopedic treatment of traumatic damage of teeth and jaw bones in children.	36
12.	Collaboration of an orthodontist in a multidisciplinary approach to the treatment of dental maxillary abnormalities.	178
13.	Standards for clinical intervention in congenital malformations of the face and jaws	10
	Exam	0
	TOTAL	698

**Thematic plan of seminars for the cycle of specialization in the specialty
"Orthodontics"**

Course code	Name of the course	Seminars (hours)
1.	Education of dental and orthodontic health. Organization of orthodontic care.	2
2.	Anatomical and biological basics in orthodontics.	32
3.	Prevention of dentoalveolar anomalies.	18
4.	Diagnosis in orthodontics.	196
5.	Orthodontic appliances.	38
6.	Orthodontic laboratory equipment and materials.	107
7.	Basics of orthodontic treatment with fixed orthodontic technique with locking fixation.	18
8.	Clinical orthodontics. Etiology, pathogenesis, clinic, diagnosis and treatment of anomalies of the dento-mandibular system: individual teeth, position of teeth, shape and size of the dentition, bite.	94
9.	Features of prosthetics of defects of teeth and dental rows in temporary, variable and permanent bite.	42
10.	Modern methods and means of orthopedic treatment of traumatic damage to teeth and jaw bones in children.	20
11.	Collaboration of the orthodontist in a multidisciplinary approach to the treatment of dental anomalies.	95
12.	Standards for clinical intervention in congenital malformations of the face and jaws	24
	Exam	6
	TOTAL	692
1.	Organization of emergency medical assistance to the population in emergency situations.	6
2.	Tuberculosis.	2
3.	Particularly dangerous infections.	4
4.	Radiation medicine.	2
	TOTAL	706

Course 1
Educating dental and orthodontic health. Organization of orthodontic care

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
01	01	00	The role of orthodontics in improving the quality of life of modern man
01	01	01	Sanitary and educational measures for preventive health care of pregnant women, children and adults of all ages
01	02	00	Conducting lessons in individual oral hygiene among orthodontic patients
01	02	01	Motivation of patients for oral health

Course 2
Anatomical and biological basics in orthodontics

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
02	01	00	Growth, development and formation of TJS
02	01	01	The biological development of children and young people - the genetic basis of development and its sociological modifications
02	02	00	Anatomical and functional features of TJS in:
02	02	01	antenatal period of development
02	02	02	newborn period
02	02	03	period of temporary bite
02	02	04	Period of alternating bite
02	02	05	period of constant bite

Course 3
Prevention of dentoalveolar anomalies

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
04	01	00	The epidemiology of dentition anomalies and the impact of environmental factors
04	01	01	Heredity
04	01	02	Feeding disorders
04	01	03	Diseases of early childhood
04	01	04	Bad childhood habits
04	01	05	Violation of the functions of the TJS
04	01	06	Abnormalities of the soft tissues of the oral cavity
04	01	07	Early tooth extraction

04	01	08	Uneven wrinkles of temporary teeth
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Course 4
Diagnostic in orthodontics

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
03	01	00	Clinical methods of orthodontic examination
03	01	01	Oral examination protocol external
03	01	02	Oral examination protocol internal
03	02	00	Additional methods of orthodontic examination
03	02	01	Photometry and Anthropometric Measurements of the Face
03	02	02	Measurement of control and diagnostic models
03	02	03	X-ray studies (aiming images, orthopantomography, teleroentgenography, radiovisiography, etc.)
03	02	04	Modern radiological examination methods: computer (CT), magnetic resonance imaging (MRI) and other
03	02	05	Radiation protection. Rules of X-ray image performance and quality assessment
03	03	01	X-ray analysis protocol (bone age assessment, TMJ evaluation, dental morphology, etc.)
03	03	02	Cephalometric analysis protocol (profile)
03	03	04	Functional methods of diagnostics
03	04	00	Classification of TJA
03	04	01	Principles of making an orthodontic diagnosis

Course 6
Orthodontic laboratory equipment and materials

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
06	01	00	Desktop orthodontic technician
06	01	01	Dental tools
06	02	00	Materials
06	03	00	Design features and technology of manufacturing orthodontic appliances
06	03	01	Removable orthodontic structures
06	03	02	Non-removable orthodontic structures
06	03	03	Bracket technique
06	03	04	Extraoral orthodontic appliances
06	03	05	Preventive structures
06	03	06	Retention apparatus

Course 7

Basics of orthodontic treatment with fixed orthodontic technique with locking fixation

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
05	01	00	Ethics and deontology in orthodontics
05	01	01	Drawing up a rational treatment plan for an orthodontic patient
05	02	01	Determination of the degree of difficulty of orthodontic treatment. Patient management protocols for multidisciplinary treatment of TJ disorders among children and adults
05	03	00	Methods of orthodontic treatment
05	03	01	The hardware method. Classification of orthodontic equipment
05	03	02	Clinical and biological basis of orthodontic treatment. Biomechanics in orthodontics
05	03	03	Psychotherapy. Fight against bad habits
05	03	04	Myotherapy
05	03	05	Speech Therapy
05	03	06	Physiotherapy. Massage
05	03	07	Surgical methods (Hotz method. Soft tissue disorders, etc.)
05	03	08	Prosthetic method
05	03	09	Complex method

Course 9

Clinical orthodontics. Etiology, pathogenesis, clinic, diagnosis and treatment of anomalies of the tooth-jaw system: individual teeth, position of teeth, shape and size of dentition, bite.

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
07	01	00	Classification of anomalies of individual teeth
07	02	00	Color anomalies, structures of hard tooth tissues
07	03	00	Anomalies of tooth shape and size
07	04	00	Anomalies in the number of teeth (supercomplete, adentia)
07	05	00	Violation of the process of teething
07	06	00	Classification of tooth position anomalies
07	07	00	Vestibular and distal position of teeth
07	08	00	The mesial and distal position of the teeth
07	09	00	Supra and infra position of teeth

07	10	00	Turns the teeth around the axis
07	11	00	Diastemas and three
07	12	00	Anomalies of the form of dentition. Methods of their treatment
07	12	01	Narrowing
07	12	02	Generally Narrowed tooth row
07	12	03	U-shaped dentition
07	12	04	One-way narrowing
07	12	05	Symmetrical narrowing
07	12	06	Asymmetric narrowing
07	12	07	Lyroid-shaped dentition
07	12	08	Trapezoidal tooth row
07	13	00	Features of treatment of anomalies of teeth and dentitions with periodontal diseases

Course 8

Features of treatment of pathological malocclusions in different age periods

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
08	01	00	Classification of bite anomalies
08	02	00	Mesial bite and its forms
08	03	00	Distal bite and its shape
08	04	00	Deep bite and its forms
08	05	00	Open bite and its forms
08	06	00	Oblique bite and its shape
08	07	00	Differential diagnosis of individual forms of bite anomalies
08	08	00	Features of treatment of dentoalveolar anomalies and deformities in periodontal diseases

Course 10

Features of prosthetics of defects of teeth and dental rows in temporary, variable and permanent occlusion

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
09	01	00	Classification of defects of teeth and dentitions among children
09	02	00	Replacement of defects in the crown of the tooth among children
09	03	00	Bridge-shaped prostheses in children
09	04	00	Design features of artificial crowns and pin teeth in

			children, indications for their manufacture
09	05	00	Rational designs of bridge prostheses in children in temporary, variable and permanent occlusion
09	06	00	Removable partial dentures in children
09	06	01	Features of manufacturing and methods of fixing partial removable baby dentures
09	06	02	Requirements for removable dentures and procedure for their replacement at the stages of formation of the chewing apparatus
09	07	00	Prevention of complicated dentition defects in children
09	07	01	Preparation of oral cavity for prosthetics for complicated defects of dental rows in children
09	08	00	Design features of complete dentures in children at different ages, the limits of the prosthetic field, the rules of anatomic tooth placement
09	08	01	Requirements for materials used for the manufacture of children's dentures and apparatus

Course 10

Features of prosthetics of defects of teeth and dental rows

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
10	01	00	Classification and diagnosis of trauma of teeth and jaws in children
10	01	01	Significance of age-specific features of tooth structure, periodontium, jaw bones in traumas
10	02	00	Modern orthopedic treatment of traumatic damage to the teeth and indications for their use
10	02	01	Orthopedic treatment of maxillofacial deformities associated with trauma in temporary, variable and permanent occlusion
10	02	02	Orthopedic appliances used in the treatment of the effects of tissue injuries of the dento-maxillofacial area in children
10	02	03	Prosthetics at defects of tissues of maxillofacial area

Course 11

Collaboration of the orthodontist in the complex of multidisciplinary approach to the treatment of dental maxillary anomalies

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
11	01	00	Features of orthodontic treatment for periodontal tissue diseases
11	01	01	Orthodontic preparation for rational oral prosthesis
11	02	00	Indications for the use of occlusal drops in patients with TMJ disorders
11	02	00	Surgical methods of preparation for orthodontic treatment
11	02	01	Plastic bridges, shallow mouth cavity
11	02	02	Compactostomy
11	02	03	Removal of teeth according to orthodontic indications
11	02	04	Opening of the palatine suture
11	02	05	Opening of crowns of the retina and supercomplete teeth
11	03	00	An algorithm for the treatment of skeletal defects. Maintaining an orthodontic patient before and after surgery
11	03	01	Collaboration of an orthodontist with a plastic surgeon during the treatment of head and neck defects
11	04	00	Microimplants in orthodontics
11	05	01	Complex approach of orthodontist, speech therapist and psychologist in orthodontic pathology

Course 12

Standards for clinical intervention in congenital malformations of the face and jaws

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
12	01	00	Defects of the development of the TJA and factors that cause them
12	02	00	Functional and morphological changes of the chewing apparatus in children with congenital irregularities of the alveolar sprout, hard and soft palate
12	03	00	Tactics of an orthodontist in the treatment of children with congenital cleft lip, alveolar process, hard and soft palate
12	03	01	Features of orthodontic and orthopedic treatment of children with birth defects
12	03	02	Preparation of the oral cavity for surgery

12	03	03	Choice of rational designs of orthopedic and orthodontic devices. Aspects of orthodontic intervention in the complex of multidisciplinary treatment of developmental disabilities
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Course 13

General biological and medical subjects. Medical psychology - features of psychology of the child, teenager and adult

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
13	01	00	Psychology. The role of psychology in orthodontics
13	02	00	Methods of controlling the physical and mental development of the child
13	02	01	Influence of disorders in psychological development on the formation of TJA
13	03	00	The dynamics of the patient's attitude to his illness. Age peculiarities of attitude towards TJA
13	04	00	Psychological prognosis of the adequacy of orthodontic treatment
13	04	01	Bad childhood habits and psychological factors in their formation
13	04	02	Methods of psychological correction of harmful children's habits
13	04	03	Establishing contact and positive reaction in the patient for orthodontic treatment
13	04	04	Educating motivation for orthodontic treatment

Course 14 Speech Therapy

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
14	01	00	Physiology and pathology of hearing and speech in the genetic aspect
14	02	00	Speech Therapy. Connection with other sciences and its role in orthodontics
14	03	00	Features of language formation. Disorders of the tongue in the pathology of the bite
14	03	02	Types of dyslism
14	03	03	Sigmatism
14	03	04	Rotacism
14	03	05	Landacism

14	03	06	Features of speech therapy for bite pathology
14	04	00	Logopedic articulation gymnastics in dysplasia
14	05	00	Logopedic correction in patients in the postoperative period (plastic of bridles of tongue, lips, oral cavity)
14	06	00	Stuttering. Methods of correction. Communication with other harmful children's habits in case of malocclusion

Course 15

Organization of orthodontic care

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
15	01	00	Health education
15	01	01	Structure and principle of organization of orthodontic assistance to the population
15	01	02	Organization of work of the orthodontic office
15 ,	01	03	Organization of dental laboratory
15	01	04	Organization of orthodontic care for children, adolescents and adults
15	01	05	Organization of orthodontic care for patients with birth defects
15	01	06	Organization of prevention of TJA and age-related deformities. Gerontostatology and orthodontics
15	02	00	Dispensary principles in orthodontics
15	03	00	Forensic medicine and orthodontics
15	04	00	Ergonomics in orthodontics
15	05	00	Patient and doctor safety rules for cross-infection in the orthodontic office

ADDITIONAL PROGRAMS

<i>Code</i>			<i>Section name</i>
<i>Section</i>	<i>Topic</i>	<i>Element</i>	
01	00	00	Organization of emergency medical aid to the population in emergency situations Organization of medical-evacuation support of the affected population in the centers of catastrophes.
01	01	00	
01	02	00	Organization of specialized medical teams of constant readiness. Features of rendering skilled and specialized help to the afflicted children in the conditions of peacetime catastrophes.
02	00	00	Humanitarian aspects of clinical thinking

03	00	00	Tuberculosis
04	00	00	Particularly dangerous infections
OS	00	00	Radiation medicine
06	00	00	AIDS
07	00	00	Medical genetics
OH	00	00	Combating domestic violence
09	00	00	Military medical training
09	01	00	Organization of medical support for troops
09	01	01	Topical Issues of Organization of Medical Support for Military and Peacekeeping Troops
09	01	02	Modern system of medical and evacuation support of the Armed Forces of Ukraine
09	01	03	Medical service of operational associations
09	02	00	Special military training
09	02	01	Topical issues of military dentistry and provision of dental care to the population in emergency situations
09	02	02	Organization of therapeutic, surgical and orthopedic dental care in emergency situations
09	02	03	Principles and methods of treatment of gunshot wounds and injuries of maxillofacial area
09	02	04	Facial burns. Combined radiation lesions of the maxillofacial area
09	02	OS	Organization of nutrition and care of the injured in the maxillofacial area during the stages of medical evacuation
10	00	00	Humanitarian aspects of clinical thinking
11	00	00	Tuberculosis

Approved at the meeting of the Department of Pediatric Dentistry

protocol No. _1_ of «_28_» August _ 2019

Head of the Department Dr. Med. Professor

O. V. Klitynska
«_28_» _ August _ 2019 .

CURRICULUM
cycle of specialization in the specialty "Orthodontics"

Course code section	Name of courses, sections
1.	Education of dental and orthodontic health. Organization of orthodontic care.
1.1.	Sanitary and educational measures for the prevention of TJA of pregnant women, children and adults of all ages.
1.2.	Epidemiological study of dentoalveolar anomalies.
1.3.	Medical examination of the children by the dentist.
1.4.	Legal aspects of orthodontic care. Organization of orthodontic care for children and adults.
1.5.	Legal medical and reporting documentation in the practice of an orthodontic doctor. Outpatient card of an orthodontic patient. Informed consent to orthodontic treatment.
1.6.	Orthodontic care protocols.
2.	Anatomical and biological basics in orthodontics.
2.1.	Embryogenesis of the oral cavity.
2.2.	Perinatal prophylaxis of dental maxillary anomalies.
2.3.	Growth and development of the maxillofacial area.
2.4.	Physiological types of occlusion.
2.5.	Abnormal types of bite.
2.6.	Clinical and biological basis of orthodontic treatment. Biomechanics in orthodontics.
2.7.	Orthodontic forces.
2.8.	Types of bone remodeling under the influence of orthodontic force.
2.9.	Basics of drawing up a rational treatment plan for an orthodontic patient.
3.	Basics of drawing up a rational treatment plan for an orthodontic patient.
3.1.	Rachitis and its effect on the formation of the dentition system. Ante- and postnatal specific, non-specific rickets prevention.
3.2.	The main functions of the oral cavity: anomalous and physiological course, functional methods of research. Pathogenesis of dentoalveolar anomalies formation under the influence of anomalous functions of the oral cavity.
3.3.	Bad habits in children. Classification. Influence of bad habits on the formation of the dentition system.
3.4.	Instrumental and noninstrumental myo-gymnastics in the complex of prevention and early treatment of dental maxillary anomalies.
3.5.	Thyroid therapy and functional dental maxillary balance: justification for the use of prevention and early treatment of dental maxillary

	abnormalities.
3.6	Influence of the general health of the orthodontic patient on the formation of anomalies of the dentition system.
4.	Diagnosis in orthodontics.
4.1.	Subjective and objective clinical methods of examination of orthodontic patients.
4.2.	Clinical diagnostic tests in orthodontics.
4.3.	Diagnostic Expert System (DES) for evaluation of the condition of the dento-mandibular complex.
4.4.	Photometric methods of face examination in direct and lateral projections.
4.5.	Anthropometric methods for determining Garson face shape and Isar IFM face index.
4.6.	Biometric methods of research of control and diagnostic models of dental series.
4.7.	Radiological methods of research in orthodontics.
4.8.	Functional methods of research in orthodontics.
4.9.	Classifications of dentition anomalies.
4.10.	The epidemiology of dentition anomalies and the impact of environmental factors.
4.11.	Hereditary syndromes in orthodontics.
5.	Orthodontic appliances.
5.1.	Classification of orthodontic equipment.
5.2.	Structural elements, rules of activation, rules of manufacture of devices of mechanical action.
5.3.	Structural elements, rules of activation, rules of production of functional guides.
5.4.	Structural elements, rules of activation, rules of manufacture of functionally operating devices.
5.5.	Structural elements, rules of activation, rules of manufacture of devices of combined action.
5.6.	Rules of choice of the orthodontic device depending on the mechanism of action of the device and the stage of formation of the occlusion.
5.7.	Adaptation of children to the action of orthodontic appliances.
5.8.	Biomorphological changes in the dentition system of orthodontic devices. Periodontal. Suture connections. Temporomandibular joint.
6.	Orthodontic laboratory equipment and materials.
6.1.	General characteristics of the materials used for the manufacture of orthodontic appliances.
6.2.	Characteristics and properties of the printed masses used in orthodontics
6.3.	Constructive and additional materials used in orthodontics.
6.4.	Manufacturing technology of structural elements of orthodontic appliances.
6.5.	Methods of repairing orthodontic appliances.

7.	Basics of orthodontic treatment with fixed orthodontic technique with locking fixation.
7.1.	Basic principles of orthodontic treatment using braces technique.
7.2.	Modern bracket system. Classifications and characteristics
7.3.	Modern bracket systems: basic structural elements, indications for use, varieties of braces.
7.4.	The main power elements of the NOT.
7.5.	Methods of fixing braces. Tools and materials.
7.6.	Arc, as the main force element of the NOT. The regularities of the application of arches at various stages of orthodontic treatment of bracket technique.
7.7.	Debonding of braces. Features of occupational hygiene after removal of braces. Prevention and treatment of lesions of hard tissues of teeth.
8.	Anchor support in orthodontics.
8.1.	Anchor support in orthodontics
8.2.	Types of anchor support, tools, types of microimplants, tools, typical installation locations.
8.3.	Indications and contraindications for the installation of microimplants when using a fixed orthodontic technique.
9.	Clinical orthodontics. Etiology, pathogenesis, clinic, diagnosis and treatment of anomalies of the maxillary system: individual teeth, tooth position, shape and size of the dentition, bite.
9.1.	Etiology, pathogenesis, clinic, classification, diagnosis, prevention and treatment of anomalies in the number of teeth.
9.2.	Etiology, pathogenesis, clinic, classification, diagnosis, prevention and treatment of anomalies of teething.
9.3.	Etiology, pathogenesis, clinic, classification, diagnosis, prevention and treatment of anomalies of tooth position.
9.4.	Etiology, pathogenesis, clinic, classification, diagnosis, prevention and treatment of anomalies in the shape and size of the dentition.
9.5.	Etiology, pathogenesis, clinic, classifications, diagnosis, prevention and treatment of bite anomalies in the sagittal, vertical and transversal planes.
10.	Features of prosthetics of defects of teeth and dental rows in temporary, variable and constant occlusion.
10.1.	Etiology. Classification of defects of teeth and dentitions in children.
10.2.	Types of dentures used to replace dental and dental defects in children.
10.3.	Clinical and laboratory stages and features of manufacture, ways to improve the fixation of partial and complete removable dentures.
10.4.	Adaptation of children to the use of removable dentures and the possibility of its adjustment.
10.5.	Clinical and laboratory stages and features of manufacturing non-removable baby dentures.

11.	Modern methods and means of orthopedic treatment of traumatic damage to teeth and jaw bones in children.
11.1.	Classification of dental injuries in children.
11.2.	Clinical picture and morphological features of tooth injuries in children
11.3.	Types of fixation of teeth in traumatic injuries.
11.4.	Method of temporary fixation of teeth with traumatic injuries. Indications for use.
11.5.	Age characteristics of the child's body. Their influence on the manifestations of the clinical picture and the course of reparative processes.
11.6.	Jaw injuries. Classification. The clinical picture.
11.7.	Significance of age characteristics of tooth structure, periodontium, jaw bones in traumatic injuries.
11.8.	Modern methods and means of orthopedic treatment of traumatic damage to jaw bones.
12.	Collaboration of the orthodontist in a multidisciplinary approach to the treatment of dental anomalies.
12.1.	Index evaluation of oral hygiene in orthodontic treatment.
12.2.	Subjects, means and features of carrying out individual oral hygiene in orthodontic treatment with removable and fixed equipment.
12.3.	Features of professional oral hygiene in orthodontic treatment with removable and non-removable technique.
12.4.	Selective grinding of tubers of temporary teeth.
12.5.	Features of orthodontic treatment for periodontal diseases.
12.6.	Features of orthodontic treatment for non-carious lesions of solid tissues.
12.7.	Features of orthodontic treatment for decompensated caries disease.
12.8.	The role of the orthodontist in the complex treatment of patients with periodontal diseases and defects of the dental rows and secondary deformations of the occlusal plane.
12.9.	Methods of surgical optimization of orthodontic treatment.
12.10.	Orthognathic surgery - the prospect of complex treatment of gnathic forms of tooth-jaw anomalies.
12.11.	Features of orthodontic treatment of patients with diseases of the temporomandibular joint.
12.12.	Myotherapy, speech therapy, massage, physiotherapy in orthodontics.
12.13.	Use of physiotherapy methods to optimize orthodontic treatment.
13.	Standards for clinical intervention in congenital malformations of the face and jaws
13.1.	Birth defects of face. Etiology. Classification
13.2.	Functional and morphological changes of the chewing apparatus in children with congenital irregularities of the alveolar process, hard and soft palate.

13.3.	Orthodontic assistance to children in the complex treatment of congenital cleft of lip and palate.
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Thematic plan of lectures
for the trainees of the specialization cycle in orthodontics

№	Name of topic	Hours		
		l	s	p
1	Individual and professional oral hygiene in orthodontic patients.	2		
2	Motivation of patients for oral health	2		
3	Etiology, pathogenesis, clinic, diagnostics and treatment of pathology of hard tissues of teeth and periodontal diseases in the complex of treatment of orthodontic patients.	2		
4	Medical examination of the dentist by the dentist.	2		
5	Organization of emergency medical assistance to the population in emergency situations.	6		
6	Embryogenesis of the oral cavity. Anatomy - functional features of a newborn mouth.	2		
7	Growth and development of maxillofacial area.	2		
8	Features of chewing muscles in children at different ages. Anatomical and functional features of the temporomandibular joint in children.	4		
9	The concept of "norm" in orthodontics. Physiological types of occlusion. Abnormal types of bite.	2		
10	Rachitis and its effect on the formation of the dentition system.	2		
11	The main functions of the oral cavity: anomalous and physiological course, functional methods of research. Pathogenesis of dentoalveolar anomalies formation under the influence of anomalous functions of the oral cavity.	2		
12	Instrumental and noninstrumental myo-gymnastics in the complex of prevention and early treatment of dental maxillary anomalies.	2		
13	Shield therapy and functional dental maxillary balance: justification for the use of prevention and early treatment of dental maxillary abnormalities.	2		
14	The role of timely repair of the oral cavity in the prevention of tooth abnormalities.	2		

15	Influence of the general health of the orthodontic patient on the formation of anomalies of the dentition system.	2		
16	Subjective and objective clinical methods of examination of orthodontic patients.	2		
17	Application of clinical diagnostic tests in orthodontics.	4		
18	Photometric methods of face examination in direct and lateral projections.	2		
19	Biometric methods for the study of models in the sagittal plane.	2		
20	Biometric methods of model investigation in the transversal plane.	2		
21	Biometric methods for the study of models in the vertical plane.	4		
22	Radiological methods of research.	2		
23	X-ray anatomy of maxillofacial area in children.	2		
24	Radiography of the brush. Study of the bone age of orthodontic patients.	2		
25	Panoramic radiography in orthodontics.	2		
26	Radiography will affect the mandibular joint.	2		
27	Teleradiography in orthodontics.	2		
28	Schwartz TRT analysis.	2		
29	Analysis of TWG by the Downs method.	2		
30	Ricketts analysis of TWG	2		
31	Computed 3D tomography in orthodontic diagnostics.	2		
32	Functional methods of research in orthodontics.	2		
33	Classifications of tooth-jaw anomalies.	2		
34	Principles of making an orthodontic diagnosis.	2		
35	The epidemiology of dentition anomalies and the impact of environmental factors	2		
36	Hereditary syndromes in orthodontics.	2		
37	Clinical and biological basis of orthodontic treatment. Biomechanics in orthodontics	2		
38	Drawing up a rational treatment plan for an orthodontic patient.	2		
39	Functional analysis of the condition of the temporomandibular joint.	2		
40	Classification of orthodontic equipment.	4		
41	Orthodontic apparatus of mechanical action.	2		
42	Orthodontic apparatus of functional action.	2		

43	Orthodontic devices of combined action.	2		
44	General characteristics of the materials used for the manufacture of orthodontic appliances.	2		
45	Design features and technology of manufacturing orthodontic appliances.	2		
46	Application of plastic self-curing masses for production of removable orthodontic appliances, preventive devices.	2		
47	Dental materials used in the manufacture of non-removable orthodontic and retentive apparatus.	2		
48	Etiology, pathogenesis, clinic, classification, diagnosis, prevention and treatment of anomalies of tooth position.	2		
49	Etiology, pathogenesis, clinics, classifications, diagnostics, prevention and treatment of anomalies of the dentition.	2		
50	The limits of using an extension to treat dental anomalies	2		
51	Features of examination of patients with bite abnormalities in the sagittal plane.	2		
52	Methods for treating the gnathic forms of bite anomalies in the sagittal plane.	2		
53	Open bite. Etiology and pathogenesis.	2		
54	Deep bite. Etiology and pathogenesis.	2		
55	Cross Bite. Etiology. Pathogenesis. Morphological and functional disorders.	2		
56	Etiology. Classification of defects of teeth and dentitions in children.	2		
57	Features of manufacturing and methods of improving the fixation of partial and complete removable dentures.	2		
58	Classification of dental injuries in children.	2		
59	Types of fixation of teeth in traumatic injuries.	2		
60	Age characteristics of the child's body. Their influence on the manifestations of the clinical picture and the course of reparative processes.	2		
61	Jaw injuries. Classification. The clinical picture.	2		
62	Modern methods and means of orthopedic treatment of traumatic damage to jaw bones.	2		
63	Features of individual oral hygiene during orthodontic treatment.	2		

64	The role of the orthodontist in the complex treatment of patients with diseases.	2		
65	The role of the orthodontist in the complex treatment of patients with defects in the dentition and secondary deformations of the occlusal plane.	2		
66	Anchor support in orthodontics	2		
67	Soft tissue surgery to optimize orthodontic treatment.	4		
68	Functional and morphological changes of the chewing apparatus in children with congenital irregularities of the alveolar sprout, hard and soft palate.	2		
69	Tactics of the doctor-orthodontist in the treatment of children with congenital cleft lip, alveolar process, hard and soft palate.	2		
70	Orthodontic treatment of patients with birth defects in the period of constant occlusion.	2		
71	Speech therapy in the complex treatment of dental maxillary anomalies	2		

Thematic plan of seminars
for the trainees of the cycle of specialization in orthodontics

№	Name of topic	S
1	Sanitary and educational measures for the prevention of TJA of pregnant women, children and adults of all ages.	6
2	Epidemiological study of dentoalveolar anomalies.	4
3	Features of occupational oral hygiene at the stages of orthodontic treatment.	8
4	Formation of dispensary supervision groups in orthodontics. Planning of preventive measures.	6
5	Planning of orthodontic treatment depending on the child's emotional state at different ages.	6
6	Organization of emergency medical aid to the population in emergency situations.	6
7	Legal aspects of orthodontic care. Organization of orthodontic care for children and adults.	8
8	Legal medical and reporting documentation in the practice of an orthodontic doctor. Outpatient card of an orthodontic patient. Informed consent to orthodontic treatment.	8
9	Protocols for the provision of orthodontic care.	8
10	Perinatal prophylaxis of dental anatomy Anatomy - functional features of the oral cavity of the newborn.	6
11	Features of care and feeding of healthy newborns and those who have congenital anomalies of the maxillofacial area.	6
12	General and local mechanisms that determine and control the growth and development of structures of the maxillofacial area.	8
13	Features of structure and function of chewing and facial muscles in children.	4
14	Structure and function of the TMJ in anomalous types of occlusion.	8
15	Ante- and postnatal specific, non-specific rickets prevention. Features of the formation of the dentoalveolar system in rickets.	6
16	Characteristics of the functions of the oral cavity at different ages in physiological and abnormal types of occlusion	6
17	Bad habits in children. Classification. The influence of bad habits on the formation of the dentition system.	8
18	Relationship between the overall health of the child and the condition of the dentition system to the formation of anomalies of	6

	the dentition system.	
19	Clinical methods of examination of orthodontic patients.	6
20	Characteristics of radiological methods used in orthodontics. Indications and contraindications to their use.	6
21	Investigation of structures of the maxillofacial area depending on the stage of their formation.	6
22	Topographic anatomy of the skeleton of the brush.	6
23	X-ray anatomy of structures of maxillofacial area in children according to panoramic radiography.	6
24	Tomography and dental radiovisiography as a method of studying the structures of the maxillofacial area.	8
25	Computer training for the Elex licensing exam.	8
26	Diagnostic possibilities of using 3D tomography in orthodontic diagnostics.	6
27	Study of the function of the muscles of the maxillofacial area.	6
28	Methods for studying the functions of the dento-mandibular system. Chewing function research	8
29	Methods for studying the functions of the dento-mandibular system. Respiratory function research.	8
30	Periods of development of classifications of dentition system. Norm and pathology in orthodontics.	6
31	Classification of anomalies of the WHO dentition system.	8
32	Features of the infant organism that influence the development of inflammatory diseases of the maxillofacial area	6
33	Hereditary and congenital dental anomalies.	6
34	A multidisciplinary approach of orthodontists and geneticists in preventing the occurrence and correction of hereditary anomalies of the dentition system.	8
35	Laws of biomechanics and tooth movement in orthodontics.	6
36	Basic provisions of biomechanics. The main types of tooth movement. Forces used in orthodontics.	8
37	Types of bone remodeling under the influence of orthodontic force.	8
38	Orthodontic appliances, their structural elements, rules of activation, choice of point of support and point of application of force	8
39	Rules of preparation of the treatment plan. Indicators of the status of the dentition system affecting the preparation and	6

	implementation of the treatment plan.	
40	Diseases of the temporomandibular joint and chewing muscles.	6
41	Patient management protocols are multidisciplinary treatment of TJS disorders in children and adults.	8
42	Rules of choice of the orthodontic device depending on the mechanism of action of the device and the stage of formation of the occlusion.	8
43	Adaptation of children to the action of orthodontic appliances.	8
44	Biomorphological changes in the dentition system of orthodontic devices. Periodontal. Suture connections. Temporomandibular joint	8
45	Myotherapy, speech therapy, massage, physiotherapy in orthodontics.	8
46	Use of physiotherapy methods to optimize orthodontic treatment.	8
47	Application of laser radiation in the stages of orthodontic treatment.	8
48	Application of electrophoresis and ultraviophoresis at the stages of orthodontic treatment.	8
49	Characteristics and properties of the masses used in orthodontics	6
50	The value of gypsum control and diagnostic models in the practice of orthodontics.	8
51	Modern technologies of production of removable orthodontic devices.	8
52	Constructive elements of bracket technique	8
53	Modern bracket system. Classifications and characteristics	8
54	Modern bracket systems: basic structural elements, indications for use, varieties of braces.	8
55	The main power elements of the NOT.	8
56	Clinical picture and diagnostics of anomalies of an eruption of separate teeth.	6
57	Anomalies of tooth position due to partial adentation.	8
58	Diagnostic criteria for the determination of anomalies in the dentition.	6
59	Patient compliance and orthodontic treatment	8
60	Conducting a retention period in the treatment of anomalies of the dentition.	8
61	Etiological factors and pathogenesis of bite anomalies in the sagittal plane.	8
62	The use of extra-traction in the treatment of prognathic bite.	8
63	Use of facial mask, stimulation of growth of the upper jaw in the treatment of progenic occlusion.	8

64	Treatment of patients with open bite fixed technique	8
65	Treatment of patients with deep bite fixed technique	8
66	Errors and complications in the treatment of patients with bite anomalies in the vertical plane.	8
67	Principles of treatment of dental alveolar forms of cross bite	8
68	Types of dentures used to replace dental and dental defects in children.	6
69	Premature tooth extraction. Diagnosis. The anomalies of the position of individual teeth and groups of teeth are caused by premature removal	8
70	Diagnosis according to panoramic radiography of anomalies of teething caused by premature removal.	8
71	Limits of children's removable dentures and their design features.	6
72	Adaptation of children to the use of removable dentures the possibility of its adjustment.	6
73	Terms of use and replacement of removable dentures in children.	6
74	Clinical picture and morphological features of tooth injuries in children	6
75	Significance of age-specific features of tooth structure, periodontium, jaw bones in traumatic injuries.	6
76	Methods of fixation of jaw fragments with traumatic injuries.	6
77	Production and use of dentures that replace part of the bone tissue lost due to damage.	6
78	The use of orthopedic and orthodontic structures to treat improper jaw fractures.	6
79	The use of orthopedic and orthodontic structures for the treatment of post-traumatic deformities of soft tissues	6
80	Oral hygiene status in patients using the fixed technique.	6
81	Features of orthodontic treatment for periodontal diseases.	8
82	Features of orthodontic treatment for non-carious lesions of solid tissues.	8
83	Features of orthodontic treatment for decompensated caries disease.	8
84	Orthodontic preparation of patients requiring orthopedic treatment.	6
85	Types of anchor support, means, types of microimplants, tools, typical installation locations.	6
86	Indications and contraindications for the installation of microimplants when using a fixed orthodontic technique.	8
87	The role of the dentist surgeon in the optimization of orthodontic treatment of patients.	8

88	Local anesthesia during surgery.	8
89	Method of serial removal of temporary and permanent teeth to control the teething.	4
	Features of permanent teeth removal according to orthodontic indications.	6
90	Computer training for the Elex licensing exam.	6
91	Methods of surgical optimization of orthodontic treatment for correction of the depth of mouth of the oral cavity.	6
92	Methods of surgical optimization of orthodontic treatment for correction of the location and extent of development of the bridges of the upper, lower lip and tongue.	8
93	Application of compactostotomy for optimization of tooth movement.	8
94	Indications and contraindications to the use of circular fibrotomy in complex orthodontic treatment.	8
95	Surgical correction of the bridle of the tongue in the complex treatment of orthodontic patients.	8
96	Features of orthodontic treatment with fixed technique during surgical interventions.	8
97	Diseases of the temporomandibular joint.	6
98	Birth defects. Etiology. Classification.	6
99	Methods of correction of sound pronunciation in children with dentition anomalies.	6
100	Orthognathic surgery - the prospect of complex treatment of gnathic forms of tooth-jaw anomalies.	6
Total		

Thematic plan of practical classes
for the trainees of the cycle of specialization in orthodontics

№	Name of the topic	p
1	Student registration, familiarity with the program and lesson plan.	2
2	Index evaluation of oral hygiene in orthodontic patients.	4
3	Index evaluation of oral periodontal tissue in orthodontic patients.	6
4	Cariesogenic situation. Determination of factors of cariesogenic situation and condition of hard tissues of teeth in orthodontic patients at the stages of treatment.	6
5	Articles and means of individual oral hygiene of patients with dental anesthesia at the stages of orthodontic treatment.	6
6	Local remineralization therapy and fluorine prevention of focal demineralization at the stages of orthodontic treatment.	6
7	Local prevention and treatment of periodontal tissue diseases in patients treated using a fixed orthodontic technique.	6
8	Morphological and functional features of the temporomandibular joint in children of different age groups.	6
9	Anatomical and functional signs of physiological types of occlusion.	6
10	Abnormal types of bite. Anatomical and functional features.	6
11	Application of complexes of myo-gymnastic exercises for correction of functional disorders and anomalies of dentition system.	6
12	Principles of the use and purpose of the shield apparatus in the early stages of the formation of the dentition system.	6
13	A multidisciplinary approach to the repair of the oral cavity in the complex of preventing the development of tooth-jaw anomalies and the formation of defects in the dental rows.	6
14	Mastering the skills of external and oral (or face) examination of an orthodontic patient.	4
	Mastering the skills of intra-oral examination of patients in orthodontics.	4
15	Determining the severity of morphological disorders and determining the indications for orthodontic treatment using the dental aesthetic index of N. C. Cons et al., (1986)	6
16	Determining the severity of morphological disorders and determining the complexity and duration of orthodontic treatment using the Siebert-Malygin method.	6
17	Mastering the skills of conducting differential diagnostic test of Ashler-Bitner.	4
18	Mastering the skills of conducting clinical and functional	4

	diagnostic tests Illinai - Marcosyan	
	Mastering the method of work with the diagnostic expert system (DES) to assess the condition of the dental-jaw complex.	4
21	Mastering the methods for determining Garson face shape and Isar IFM face index.	6
22	Photostatic analysis by AM Schwartz. Classification of the type of face profile by AM Schwartz.	6
23	Photometric methods of face examination in lateral projection. Analysis of the lip profile of Ricketts, Corkhouse.	6
24	The analysis of the sizes of the dental rows of temporary and variable occlusion according to ZI Long-sexed, Wetzel ,. Corkhouse.	6
25	Mastering the methods of biometric methods for the study of dentition models in the sagittal plane during the period of constant occlusion. Methods by Korkhaus, Gerlach, G.P.Schmuth	6
26	Mastering the methods of biometric measurement of control diagnostic models of dental rows in the period of temporary and variable occlusion: by Z.I. Dovgoplova, Corkhouse.	6
27	Mastering the methods of biometric measurement of control diagnostic models of dental rows in the period of constant occlusion: according to Pon in the modification of Linder-Hart, with Ton's correction, the Bolton and Nance method.	6
28	Mastering the methods of biometric measurement of control diagnostic models of dental rows in constant occlusion to determine the length and width of the apical base by the method of Snagin.	6
29	Determination of palate height on control diagnostic models of jaw height by Simon, Snaginai methods.	6
30	Mastering the method of study of the occlusal plane and the Spee curve. Opposition and infraposition of frontal and lateral teeth	4
31	Graphic method for the study of Haul-Gerber-Gerbst jaw models.	6
32	Study of the bone age of orthodontic patients. Possibilities of forecasting periods of intensive patient growth.	6
33	Intraoral contact radiography. Radiography of the palatine suture.	6
34	The study of the stage of formation of structures of the maxillofacial area according to panoramic radiography	6
35	Analysis of radiographs will affect the mandibular joint according to Parma.	6
36	Basic provisions of tele-radiography. Technique of tele-radiography. Methods of TGT analysis. Indications and contraindications to use.	6
37	Schwartz TRG analysis: identification of anatomical bone and each landmarks, major planes and angles.	6

38	Schwartz TRG analysis: constituent parts of Schwartz tele-radiograph analysis - craniometry, gnathometry, profilometry.	6
39	Anchor points. Support planes. Mastering the TRG analysis by the Downs method.	6
40	The constituent parts of the analysis of teleroentgenograms by the Downs method. Defining the type of skeleton. Type of teeth placement	6
41	Radiation medicine	4
42	Tuberculosis	6
43	AIDS, viral hepatitis	2
	Particularly dangerous infections	4
44	Military medical training	6
45	Military medical training	6
46	Special military training	6
47	Special military training	6
48	Medical Law	6
49	Anchor points. The reference planes of the TRT analysis method by the Ricketts method.	6
50	Components of the analysis of teleroentgenograms by Ricketts method.	6
51	Analysis of the type of jaw growth according to tele-radiographic research	6
52	Methods for studying the functions of the dento-mandibular system. Swallow Function Study.	6
53	Mastering the method of making orthodontic diagnosis using the classifications of dental and maxillofacial anomalies.	6
54	Mastering the method of manual examination of the TMJ.	6
55	Mastering the method of designing non-removable orthodontic devices of mechanical action.	4
56	Mastering the method of designing removable orthodontic devices of mechanical action.	6
57	Mastering the method of designing functional guides.	6
58	Mastering the method of designing functionally operating devices.	6
59	Mastering the method of designing combined action apparatus.	6
60	Activation of orthodontic appliances, depending on the mechanism of action of the device and the stage of formation of the occlusion.	6
61	The method of obtaining prints of dental rows of different masses for the production of working and control-diagnostic models.	6
62	Features of the infant organism that influence the nature of injuries of the maxillofacial area and the choice of medical tactics	6
63	Immediate conditions in the practice of dentist - orthodontist. Cardiopulmonary resuscitation.	6

64	Application of hot polymerization plastics in orthodontics.	6
65	Application of plastic self-curing masses in orthodontics.	6
66	Auxiliary materials used for processing removable apparatus. Wax. Abrasives.	6
67	Structural and auxiliary metals and their alloys used in orthodontics.	6
68	Production of structural elements of removable orthodontic appliances.	6
69	Production of single-jaw removable orthodontic appliances.	6
70	Production of single-jaw removable orthodontic devices of maxillary action.	6
71	Production of two-jaw removable orthodontic appliances.	6
72	Rules and methods of obtaining prints in the complete absence of teeth of various print masses.	6
73	Features of obtaining prints for production of partial removable dentures in children.	6
74	Mastering the method of repositioning a removable orthodontic device and a removable denture.	8
75	Age-specific features of general and local anesthesia during surgery in the maxillofacial area.	8
76	Complications of general and local anesthesia for surgery in the maxillofacial area.	8
77	Braces. Methods of fixing braces. Bracket locking tools and materials.	6
78	Arc, as the main force element of the NOT. The regularities of the application of arches at different stages of orthodontic bracket treatment technique.	6
79	Debonding of braces. Features of occupational hygiene after removal of braces. Prevention and treatment of lesions of hard tissues of teeth.	6
80	Possibilities of orthodontic treatment of retouched teeth.	8
81	Treatment of anomalies of position of teeth caused by partial adentia. The disclosure of gaps. Closing intervals. Mechanics of teeth movement.	6
82	The anomalies of the position of individual teeth. Biometric methods of model study. Determination of space deficit in the dental row	6
83	The anomalies of the position of individual teeth. Indications and method of treatment without removal of individual teeth. Rules for choosing an orthodontic device and mechanics of tooth movement.	8
84	The anomalies of the position of individual teeth. Indications and methods of treatment with removal of individual teeth. Selection of	8

	teeth for removal.	
85	Dental anomalies in the sagittal plane. Morphological and functional disorders. Methods of treatment.	6
86	Dental anomalies in the transversal plane. Morphological and functional disorders. Methods of treatment.	6
87	Dental anomalies in the vertical plane. Morphological and functional disorders. Methods of treatment.	6
88	Clinical picture, morphological disorders and orthodontic treatment of dentoalveolar forms of progenic occlusion in different age periods.	6
89	Clinical picture, morphological disorders and orthodontic treatment of dentoalveolar forms of prognathic occlusion in different age periods.	6
90	Possibilities of orthodontic treatment of gnathic forms of sagittal bite anomalies	6
91	Clinical picture, morphological and functional disorders with open bite. Treatment of patients with removable orthodontic appliances.	6
92	Clinical picture, morphological and functional disorders with deep bite. Treatment of patients with removable orthodontic appliances.	6
93	Production and application of auxiliary devices for the correction of functional disorders in the treatment of bite anomalies in the vertical plane.	6
94	Features of orthodontic examination for cross-bite.	6
95	Features of obtaining prints for the production of removable dentures in children.	6
96	Making bite templates. Determination and fixation of the ratio of shells and bite height.	6
97	Arrangement of artificial teeth in wax patterns in the manufacture of child removable dentures.	6
98	Crowns. Their features of manufacture and use in pediatric dentistry.	6
99	Replacement of defects of the crown part of the tooth in children in order to prevent the occurrence of anomalies of the position of the teeth and dental rows.	6
100	Bridges. Design features. Indications for use.	6
101	Production and use of removable two-layer dentures for replacement of defects of dental rows in children.	6
102	Technique of temporary fixation of teeth in case of traumatic injuries. Indications for use.	6
103	Orthodontic movement of traumatically damaged teeth. Indication. Contraindication.	6
104	Selective grinding of the humps of temporary teeth.	8

105	Treatment of focal demineralization of tooth enamel after orthodontic treatment with non-permanent orthodontic technique using an innovative infiltration method using "Icon" material.	8
106	Rules for selecting permanent teeth for removal when planning orthodontic treatment.	8
107	Tumors of maxillofacial area. Features of diagnosis and treatment in children.	8
108	Features of orthodontic treatment of patients with diseases of the mandibular joint.	8
109	Orthodontic care for children at the stage of preparation for surgery for congenital cleft palate and palate.	6
110	Orthodontic care for children in the postoperative period. Prevention of deformities of the upper dental arch.	6
111	Orthodontic care for children with birth defects with the use of obturators and prosthetics.	6
112	The technique of the extension of the upper dental arch in patients with congenital alveolar process and palate.	6
	Exam	4
Total		698 hours

LIST OF PRACTICAL EXAMINATION SKILLS

cycle of specialization in the specialty "Orthodontics" :

An orthodontist without a category (up to 5 years experience) should be able to:

1. To determine the prevalence of dental anomalies.
2. Determine the need for orthodontic treatment (DEI).
 - Keep medical records in accordance with the forms adopted by the Ministry of Health of Ukraine: accounting form № 043-1 / o “Outpatient card of an orthodontic patient”; accounting form № 037-2 / o “A sheet of daily record of work of a dentist-orthodontist”; accounting form № 039-3 / o “Diary of the account of work of the dentist-orthodontist (dental clinic, department, office)”
3. Determine quantitative and qualitative indicators of the work of an orthodontist.
4. Systematically work analyze.
5. Promote healthy lifestyles and health education on primary, secondary and tertiary prevention of dental-jaw abnormalities.
 - Be able to examine an orthodontic patient: be able to collect anamnesis; be able to carry out clinical methods of examination of an orthodontic patient; be able to carry out auxiliary methods of examination of an orthodontic patient;
6. Be able to conduct and analyze the data obtained during clinical diagnostic tests (LV Ilyina - Markosyan and Ashler - Bitner).
7. Be able to get prints from the upper and lower jaw with different print masses.
8. Be able to get gypsum control and diagnostic models.
9. Be able to conduct and analyze the data obtained when measuring control and diagnostic models (by the methods of ZI Dolgoplova, Schwartz, Korghaus, Pon, Gerlach, Nance, Little, Merrifield, Snagini NG, Schmuth, Bolton, Mouers, by Johnson and Tanako, Mc Namara).
10. To be able to conduct and analyze the data obtained when conducting functional research methods.

11. Be able to describe dental, axial radiographs and orthopantomograms.
12. Be able to decipher the lateral telegraph with the methods of Schwartz, Ricketts and Downs
13. Be able to have a normal structure of teeth, dental rows, jaws and their disorders.
14. Based on the survey and using the classifications of dental-jaw anomalies (AJ Katz, 1933, AI Betelman, 1956, DA Kalvelis, 1957, VY Kurlyandsky, 1957, LV Ilyina - Markosyan, 1967, KhA Kalamkarov, 1970, FY Khoroshilkina, 1985, LS Persin, 1989, Yu.M. Malygin, 1991, ICD - 10) to make a final orthodontic diagnosis.
15. Be able to draw up an orthodontic treatment plan.
16. Be able to determine the rational design of the orthodontic apparatus.
17. Be able to fill an outfit in a dental laboratory.
18. Be able to fit and hand over the orthodontic device.
19. Be able to perform correction of the base and activation of the removable apparatus (hand-held spring, retraction and retraction springs, screws, etc., an inclined plane and a pumping platform).
20. Be able to activate the fixed unit (replace elastic rings and ligatures, springs).
21. Be able to draw up a plan of preventive measures for the prevention of maxillofacial anomalies and deformities.
22. To be able to identify the risk group of dental-maxillofacial anomalies and deformities.
23. To be able to identify a complex of preventive measures aimed at preventing the development of persistent dento-maxillofacial deformities.
24. Be able to assign a rational design of removable denture to the child.
25. Be able to hand over, fit and repair a removable denture.
26. Be able to relocate a removable denture.
27. Be able to hand over and fit a permanent denture.
28. To determine the state of hygiene of the oral cavity of the patient during the use

of removable and non-removable devices, to assign the patient basic and additional objects and means of individual hygiene.

29. To carry out professional cleaning of teeth at orthodontic treatment by removable and fixed technique.

30. Be able to hand over, fit and repair the obturator.

LIST OF EXAMINATION QUESTIONS

cycle of specialization in the specialty "Orthodontics":

An orthodontist without a category (up to 5 years of experience) should know.

GENERAL KNOWLEDGE:

- state legislative acts on public health protection and other directive documents regulating the activity of health care institutions of Ukraine;
- legal health issues;
- principles of organization of dental care in Ukraine at different levels of its provision;
- basics of medical statistics and maintenance of medical records;
- principles of medical examination of the population of the orthodontist;
- the basics of basic medical and biological sciences to the extent sufficient to solve professional issues of prevention and treatment of dental diseases;
- basics of normal and pathological anatomy, physiology, embryology of maxillofacial area;
- manifestations of common diseases in the oral cavity;
- peculiarities of treatment of dental patients with concomitant somatic diseases;
- peculiarities of rendering medical aid in emergency situations;
- manifestations and principles of treatment of AIDS and skin and sexually transmitted diseases in the oral cavity;
- methods of anesthesia used in dentistry;
- the basics of intensive care;
- basics of ethics and deontology;
- safety, principles of operation and features of operation of dental equipment;
- peculiarities of work of secondary and junior medical staff in dental institutions;

EXPERTISE:

The dentist orthodontist should know:

- basics of organization of orthodontic assistance to the population;
- dental equipment, tools, materials, medicines and standards of their use for the work of the orthodontic office;
- anatomical and physiological features of a healthy person and his maxillofacial area in different age periods;
- anatomical and functional features of the temporomandibular joint in different age periods;
- physiological functions of the oral cavity and their abnormal manifestations;
- features of architectonics of bone tissue of jaws in different age periods;
- biological bases of orthodontic treatment;
- principles of clinical and auxiliary methods examination of an orthodontic patient;
- etiology and pathogenesis of maxillofacial anomalies;
- the need for orthodontic treatment and the factors by which it is determined;
- correlation of anomalies of the dentition system with pathological conditions of other organs and systems;
- indications and contraindications to orthodontic treatment;
- principles of orthodontic treatment of dental maxillary anomalies;
- methods of orthodontic treatment;
- features of early orthodontic treatment;
- features of orthodontic treatment of adults;
- features of orthodontic treatment of children with congenital cleft lip and palate;
- methods of accelerating orthodontic treatment.

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to the cycle of specialization in the specialty "Orthodontics"

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