

Ukraine Ministry of Health
Kharkiv National Medical University
Faculty of Dentistry
Department of Pediatric Dentistry and Implantology
Educational Program for Training Specialists of the Second (Master's)
Level, Higher Education Training 22 "Healthcare"
in Specialty 221 "Dentistry"
SYLLABUS OF THE COURSE
ORTHODONTICS
3d year

Compulsory or elective educational component _____ compulsory _____

Mode of the educational component _____ off-line _____
(off-line; mixed; on-line)

Field of knowledge _____ 22 "Healthcare" _____
(code and name of the field of knowledge)

Specialty _____ 221 «Dentistry» _____
(code and name of the specialty)

Educational and professional program _____ «Dentistry» _____


Of the second (master's) level of higher education

Course _____ third _____

The syllabus of the discipline was approved at
the meeting of the Department of Pediatric
Dentistry and Implantology

Protocol from
"30" August 2021 year № 1

Head of Department




(signature) prof. Nazaryan RS
(surname and initials)

"30" August 2021

Approved by the methodical commission of
KhNMU on problems of professional training
dental profile
Protocol from
"02" September 2021 year №4

Chairman of the methodical commission of
KhNMU on problems of professional training
dental profile



(signature) prof. Ruzin GP
(surname and initials)

"02" September 2021

Developers: Nazaryan Rozana Stepanivna, Kryvenko Liudmyla Stanislavivna, Khmiz Tetyana Grigorivna, Skliar Serhii Oleksiiovych, Komarov Alexey Kimovich, Lepilina Kseniia Mykhailovna.

Teachers: Kryvenko L. S., Khmiz T. G., Skliar S. O., Komarov A. K., Lepilina K. M.

Teacher information:

Nazaryan Rozana Stepanivna - Doctor of Medical Sciences, Professor, Head of Pediatric Dentistry and Implantology Department, specialization Pediatric Dentistry, Surgical Dentistry, Therapeutic Dentistry, Orthodontics.

Kryvenko Liudmyla Stanislavivna - Doctor of Medical Sciences, Professor of Pediatric Dentistry and Implantology Department, specialization Orthodontics, Pediatric Dentistry, Dentistry (General).

Khmiz Tetyana Grigorivna - Candidate of Medical Sciences (PhD), Associate Professor of the Department of Pediatric Dentistry and Implantology, specialization: Pediatric Dentistry, Orthodontics

Skliar Serhii Oleksiiovych- Candidate of Medical Sciences (PhD), Associate Professor of the Department of Pediatric Dentistry and Implantology, specialization: Pediatric Dentistry, Orthodontics

Komarov Alexey Kimovich - Assistant Professor of the Department of Pediatric Dentistry and Implantology, specialization Pediatric Dentistry, Therapeutic Dentistry, Orthodontics.

Lepilina Kseniia Mykhailovna - Assistant Professor of the Department of Pediatric Dentistry and Implantology, specialization Orthodontics.

Contact E-mail of the department: kaf.st.dytiachoist@knhmu.edu.ua

Full-time consultations: schedule and place according to the schedule of the department.

On-line consultations: schedule and place by prior arrangement with the teacher

Location: classes are held in the UDC KhNMU

Information about Discipline
1. The discipline's description
"Orthodontics"
for English-speaking 3d year students of the dental faculty

Total hours: 120/4 credits

(lectures - 10 hours, practical classes – 60 hours, ISW- 50 hours)

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the discipline	
		full-time education	evening form of study
Number of credits – 4,0	Training direction 22 "Healthcare" (code and name)	Normative	
Total number of hours- 120	Specialty: 221 "Dentistry" masters (code and name)	Year of study:	
		3-d	-
		Semester	
		6-th	-
Hours for full-time education (or evening) form of study: classrooms – 70 independent student work - 50	Education level: Specialist of the second (master's) level	Lectures	
		10 h.	-
		Practical, seminar	
		60 h.	-
		Laboratory	
		-	-
		Independent work	
		50 h.	-
Individual tasks: -			
Type of control: credit			

Educational program of higher education of Ukraine, second (master's) level, educational qualification, assigned - (master's) degree, field of knowledge - 22 Healthcare, specialty 221 "Dentistry" is based on the Law of Ukraine "«Про вищу освіту» and the resolution of the Cabinet of Ministers of Ukraine 01.02.2017 № 53 «Про внесення змін до постанови Кабінету Міністрів України від 29.04.2015 р. № 266» ", in accordance with the order of the Ministry of Education and Science of Ukraine dated 01.06.2016 № 600 «Про затвердження та введення в дію Методичних рекомендацій щодо розроблення стандартів вищої освіти»."

The program of the course determines the prerequisites for access to education, orientation and main focus of the program, the amount of ECTS credits required for a (master's) degree, a list of general and special (professional) competencies, normative and variable content of training, formulated in terms of learning outcomes and control requirements quality of higher education.

The department accepts qualified students of any race, national or ethnic origin, sex, age, people with special needs, any religion, sexual orientation, gender, veteran status or marital status for all rights, privileges, programs and activities, provided to university students.

1. The purpose and objectives of the discipline

The purpose of the study of orthodontics is determined by the ultimate goals set on the basis of the of training a doctor in the specialty in accordance with the block of its units and is the basis for building the content of the discipline. The description of goals is formulated through skills in the form of target tasks (actions). On the basis of the ultimate goals for each final control or unit, specific goals are formulated in the form of certain skills (actions), target tasks that ensure the achievement of the ultimate goal of studying the discipline.

2 Discipline status: the main format of the discipline is mixed - a discipline that has support in the Moodle system, teaching the discipline, combines traditional forms of classroom learning with elements of distance learning, which uses available interactive information technology (ZOOM, Moodle), face-to-face and distance counseling

3 Methods of training. Clinical (curation of children with orthodontic anomalies and deformations), on phantoms, digital information (presentations, video materials, methodical recommendations, lectures), scientific (participation in scientific researches in the discipline), control (tests, situational tasks, assessment of practical skills defence a case history) are used for carrying out the lessons

4 Recommended literature

Basic:

1. Fleece PS Orthodontics. - Ball "New Book", 2006. - 308 p.
2. Shmut H.P.F., Holthreyv EA, Drescher D. Practical orthodontics. Ed. prof. PS Fleece. Per. s Nam. - Lions: HalDent, 1999.
3. Stephen Williams. Quick Guide to telenthenohrafiyi. Ed. prof. PS Flis. - Lviv, 2006.

Additional:

1. Betelman AI, AI Poznyakov, Muhyna AD, Alexandrov Y. Ortopedycheskaya stomatolohyya childish age, Kiev, "Health" 1965, p. 405
2. AI Betelman Ortopedycheskaya stomatolohyya. M. "Medicine" 1965
3. Bennett J., R. Makloulyn ed prof. PS fleece "Mehashka ortodontycheskoho of treatment tehnykoy Direct arc" g Lions "HalDent" 2001.

<http://www.studentlibrary.ru/book/ISBN9785970430354.htm>

<http://www.dental-press.ru>

<http://www.dentoday.ru/products/3/>

<http://www.studmedlib.ru/book/ISBN9785970426722.html>

1. Prerequisites and co-requisites of the discipline

Orthodontics as an academic discipline is based on a previous study of human anatomy; histology, embryology and cytology, medical biology, medicinal chemistry, biological and bioorganic chemistry, microbiology, virology and immunology and integrated with these disciplines;

2. Learning outcomes

After study of discipline "Orthodontics" student should know and be able to:

1. Analyze test results orthodontic patient:
 - with anomalies size of individual teeth;
 - some forms of anomalies of the teeth;
 - with anomalies number of individual teeth;
 - with diastema and diaeresis;
 - with crowded teeth;
 - with tortoanomaliamy;

- with vestibular-oral tooth position;
 - prognathic forms of bite;
 - prohenichnymy forms of bite;
 - open bite;
 - with deep bite;
 - with single or bilateral cross-bite.
2. Identify pearls dispensary supervision of orthodontic patients and preventive measures in a group of risk factors:
- with anomalies size of individual teeth;
 - some forms of anomalies of the teeth;
 - with anomalies number of individual teeth;
 - with diastema and diaeresis;
 - with crowded teeth;
 - of vestibular-oral tooth position;
 - prognathic forms of bite;
 - prohenichnymy forms of bite;
 - with single or bilateral cross-bite.
3. Identify leading symptoms and syndromes in orthodontic practice:
- Facial asymmetry;
 - Pain in the bones of the face;
 - shortening the upper lip;
 - shortening the soft palate;
 - rhinophonia (open and closed);
 - deformation of bones of facial skeleton;
 - changed the color of teeth;
 - changes mezhalveolyarnoy space;
 - broken teeth;
 - convergence (divergence) teeth;
 - availability of slot defects of the face;
 - restrictions on opening horn;
 - disproportionately face;
 - moving teeth.
4. To identify congenital and acquired defects of the maxillofacial area.
1. To demonstrate the moral and ethical principles of medical specialist and principles of professional subordination to receiving orthodontic
2. Justify and formulate preliminary clinical diagnosis of teeth anomalies and deformities:
- size anomalies of individual teeth;
 - some forms of anomalies of the teeth;
 - anomalies number of individual teeth;
 - diastem and diaeresis;
 - crowded teeth;
 - tortoanomalyi;
 - vestibular-oral tooth position;
 - prognathic forms occlusion;
 - prohenichnyh forms occlusion;
 - open bite;
 - deep bite;
 - single or bilateral cross-bite.
7. Formulate and justify syndromic diagnosis in orthodontic practice:
- asymmetry in the face;
 - in case of pain in the bones of the face;
 - while shortening the upper lip;

- while shortening the soft palate;
- at hunchyavosti (open and closed);
- the deformation of bones of the facial skeleton;
- with altered color of teeth;
- by changing mezhalveolyarnoy space;
- with damaged teeth;
- at convergence (divergence) teeth;
- in the presence of slot defects of the face;
- while limiting the opening of the mouth;
- in violation of the proportions of the face;
- in the mobility of the teeth.

8. To conduct differential diagnostics of diseases zuboschelepnoho system:

- size anomalies of individual teeth;
- anomalies form of individual teeth;
- anomalies number of individual teeth;
- with diastema and diaeresis;
- with crowding of teeth;
- at tortoanomaliyah;
- in the vestibular-oral teeth position;
- prognathic forms at the bite;
- prohenichnyh forms at the bite;
- with an open bite;
- with a deep bite;
- with single or bilateral cross-bite.

9. To conduct differential diagnosis of somatic diseases require special tactics of patients in childhood:

- heart defects;
- epilepsy;
- asthma;
- diabetes;
- HIV / AIDS;
- hepatitis;
- diphtheria;
- TB.

10. To conduct the survey orthodontic patients:

- with anomalies size of individual teeth;
- some forms of anomalies of the teeth;
- with anomalies number of individual teeth;
- with diastema and diaeresis;
- with crowded teeth;
- with tortoanomaliyamy;
- with vestibular-oral tooth position;
- prognathic forms of bite;
- prohenichnymy forms of bite;
- open bite;
- with deep bite;
- with single or bilateral cross-bite.

11. Conduct primary and secondary prevention of the most common zuboscheleshshh abnormalities and deformities:

- size anomalies of individual teeth;
- some forms of anomalies of the teeth;
- anomalies number of individual teeth;

- diastem and diaeresis;
- crowded teeth;
- tortoanomaliyi;
- vestibular-oral tooth position;
- prognathic forms occlusion;
- prohenichnyh forms occlusion;
- open bite;
- deep bite;
- single or bilateral cross-bite.

The content of the discipline

1. Thematic plan of lectures (Number of hours - 10)

№	Topic	Hours
1	The peculiarities of anatomy and function of a newborn oral cavity. Periods of development of dentognathic system. Characteristics of temporary, transitional and permanent dentition.	2
2.	Characteristics of physiological types of occlusion. Characteristics of different types of malocclusion.	2
3.	Methods of investigation of orthodontic patient	2
4.	Principles of orthodontic treatment. Orthodontic appliances.	2
5.	Prophylactics of dentognathic anomalies development.	2
	Total	10

2. Thematic plan of practical classes (Number of hours – 60)

	Topic	Hours
Age-related peculiarities of the human dentognathic system		
	Topic № 1: Stages of development of dentognathic system: antenatal, postnatal. Anatomic and functional peculiarities of the oral cavity and the temporomandibular joint of newborn.	4
	Topic № 2: Growth and formation of the jaw bones in the age aspect. Peculiarities of development of the masticatory muscles in children. Morphological and functional characterization of temporary, transitional and permanent dentition.	4

Topic № 3: The concepts of the norm in orthodontics. Orthognatic bite and its characteristics. Keys of the occlusion by E.H.Angle and F.L.Andrews. Physiological types of occlusion. The period of the height of the bite. The final plane on LJ Boume A.M.Shwarz	4
Topic № 4: Control 1.	4
Methods of investigation of orthodontic patient	
Topic № 5: Clinical method of examination of patients with dentognatic anomalies.	4
Topic № 6: Functions of the oral cavity in normal and malocclusion. Methods of investigation of functions of oral cavity.	4
Topic № 7: Anthropometric methods of investigation of patients with dentognatic anomalies.	4
Topic № 8: Photometric method of investigation.	4
Topic № 9: Roentgenologic methods of investigation. Methods of the telerontgenografy.	4
Topic № 10: Classification of the dentognatic anomalies and deformations. Etiology, pathogenesis, clinical manifestations of different types of malocclusion.	4
Topc № 11: Control 2	4
Basic principles and methods of treating patients with dentognatic anomalies	
Topic № 12: Orthodontic appliances: structures, classification, principles of systematization. Orthodontic appliances of mechanical action. Functional orthodontic appliances, appliances of combined action. Retention apparatus	4
Topic № 13: Theories of adjustment of bone for orthodontic treatment. Modern notions of reactive changes in the periodontal tissues, the median palatal suture, the temporomandibular joint for orthodontic treatment. Orthodontic forces.	4
Topic № 14: Methods of treatment of orthodontic patients: functional, surgical, physical therapy treatments for orthodontic patients. Principles of organization of orthodontic care.	4
Topic № 15: Final control.	4
Total	60

**3. Independent work
(Total hours - 50)**

№	Topic	Hours	Type of control
1	History of domestic orthodontics. Formation of Orthodontics as an independent clinical discipline. The modern meaning, purpose and objectives of the profession.	2	Current at workshops
2	Development of the mouth and face in embryogenesis.	2	Current at workshops
3	The etiology of tooth-jaw abnormalities and deformities (endogenous and exogenous factors).	2	Current at workshops
4	Anthropometric examination of the face and the head of the patient. Evaluation of facial proportions by Garson and Izard G. transversal and vertical proportions of the face. Evaluation forms the head.	3	Current at workshops
5	Production of standardized photographs. Analysis of the soft tissues of the face in the diagnosis and planning of orthodontic treatment (profile face smiles).	3	Current at workshops
6	Anthropometric measurement models of the jaws method Bolton, Nancy B. and A. Fuss Schwartz. Rotation of the first molars to EM Riketsu.	4	Current at workshops
7	Auxiliary examination methods of orthodontic patients. Fotosymetroskopiya and symetrohrafiiya.	2	Current at workshops
8	Explanation TRG in frontal projection.	5	Current at workshops
9	Explanation TRG methodology EM Riketsa.	5	Current at workshops
10	Explanation and evaluation of TMJ imaging.	5	Current at workshops
11	Methods of studying the state of TMJ (artrofonografa, rheography, angiography).	4	Current at workshops
12	Types of growth of the jaws.	3	Current at workshops
13	Definition ossifikatsiyi skeleton. Evolution wrist radiographs.	3	Current at workshops
14	The role of language in carrying out the functions of the teeth-jaw system. Methods of studying forms of language. Lines for tongue frenulum F.YA. Horoshylkinoyu.	3	Current at workshops
15	Auxiliary examination methods of orthodontic patients. Fotosymetroskopiya and symetrohrafiiya.	4	Current at workshops
	Total	50	

Discipline policy and values.

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

Students can discuss different tasks, but their performance is strictly individual. You are not allowed to write off, use any kind of software, tips, use a mobile phone, tablet or other electronic gadgets during classes for purposes other than the learning process. Students are not allowed to be late for practical classes.

Visiting patients during the curation in the hospital is possible, provided that students have the appropriate uniform, a health book with a note about the timely medical examination.

Students with special needs can meet with the teacher or warn him before the start of classes, it can be done by the head of the group on the students request. If you have any questions, please contact the teacher.

Students' participation in research and conferences on this topic is encouraged.

All students of KhNMU are protected by the Regulations on prevention and settlement of Cases Related to Sexual Harassment and Discrimination at Kharkiv National Medical University, designed to determine an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. on the basis of the following regulations of Ukraine: Constitution of Ukraine; Law of Ukraine "On Education"; Law of Ukraine "On Higher Education"; Law of Ukraine "On Principles of Prevention and Counteraction of Discrimination in Ukraine"; Law of Ukraine "On Ensuring Equal Rights and Opportunities for Women and Men"; Convention for the Protection of Human Rights and Fundamental Freedoms; Convention for the Suppression of Discrimination in Education; Convention on the Elimination of All Forms of Discrimination against Women; General Recommendation № 25 to Article 4, paragraph 1, of the Convention on the Elimination of All Forms of Discrimination against Women, General Comment № 16 (2005)"Equal rights for men and women to use economic, social and cultural rights" (Article 3 of the International Covenant on Economic, Social and Cultural Rights; Committee on Economic, Social and Cultural Rights of the United Nations); education in the spirit of respect for human rights and fundamental freedoms (UNESCO), the Concept of the State Social Program for Equal Rights and Opportunities for Women and Men until 2021. Kharkiv National Medical University ensures education and work, that is free from discrimination, sexual harassment, intimidation or exploitation. The University admits the importance of confidentiality. All persons, responsible for the implementation of this policy, (staff of deans' offices, faculties, institutes and the Center of Gender Education, members of the student government and ethics committee, vice-rector for research and teaching) are confidential, regarding those, who report or accuse of discrimination. or sexual harassment (except where the law requires disclosure and / or when disclosure by the University is necessary to protect the safety of others).KhNMU creates a space of equal opportunities, free from discrimination of any national, racial or ethnic origin, sex, age, disability, religion, sexual orientation, gender, or marital status. All rights, privileges, programs and activities, granted to students or staff of the University, apply to anybody, without exception, in case they are properly qualified. The anti-discrimination policy and the

policy of counteracting sexual harassment of KhNMU are confirmed by the Codex of Corporate Ethics and the Charter of KhNMU.

The rules of behavior in University and on classes

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

During classes it is allowed:

- leave the audience for a short time if necessary and with the permission of the teacher;
- drink soft drinks;
- take photos of presentation slides;
- take an active part in the class

Forbidden:

- eat (except for persons whose special medical condition requires another - in this case, medical confirmation is required);
- smoking, drinking alcohol and even low-alcohol beverages or drugs;
- use obscene language or use words that offend the honor and dignity of colleagues and faculty;
- gambling;
- to damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);
- shouting, shouting or listening to loud music in classrooms and even in corridors during classes.

Plagiarism and academic integrity

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

Occupational Safety control

At the beginning of the first lesson of the course the teacher will explain the basic principles of labor protection by conducting appropriate training. It is expected that everyone should know where the nearest evacuation exit is, where the fire extinguisher is, how to use it, and so on.

The procedure for informing about changes in the syllabus: the necessary changes in the syllabus are approved by the methodical commission of KhNMU on the problems of professional training of dental profile and published on the website of KhNMU, the website of the Department of Pediatric Dentistry and Implantology of KhNMU.

Policy of learning activities assessment

Assessment of current learning activities (CLA)

When assessing the mastery of each topic of the discipline and for the final lesson (FL), the student is graded according to the traditional 4-point system: "excellent", "good", "satisfactory" or "unsatisfactory".

The final score for the current learning activity (CLA) and the final lesson (FL) is defined as the arithmetic mean of the traditional grades for each class and FL, rounded to 2 decimal places and listed in a multi-point scale according to the standard table.

Assessment of the final lesson

The final lesson (FL) is conducted in accordance with the curriculum of the discipline and thematic plane, during classes

To help prepare for the final lesson, the following materials are available at the information stand of the department:

- basic tasks ("Krok 2. Dentistry");
- list of theoretical questions;
- list of practical skills;
- a list of drugs, for prescriptions;
- list of medical records for dentistry;
- criteria for assessing the knowledge and skills;
- schedule of reworks of missed classes during the semester.

Assessment of individual student tasks

At the meeting of the department should be approved a list of individual tasks (participation in reports at student conferences, profile competitions, preparation of analytical reviews with presentations) with the definition of the number of points for their implementation, which can be added as incentives (not more than 10).

Points for individual tasks are awarded to the student only by the commission (commission - head of the department, head teacher, group teacher), once, only under the conditions of their successful implementation and defense. The total amount of points for CLA may not exceed 120 points.

Assessment of students independent work

Assimilation of topics that are submitted only for independent work is checked during the final lesson and differential credit.