

## Catalog of elective disciplines

**1. Department: Surgical and orthopedic dentistry**

**2. Level of training: internship**

**3. Specialty: “Dentistry”**

**4. Course: 6**

**5. Name of the elective discipline “Fundamentals of functional occlusion”**

**6. Number of credits: 5**

**7. Goal: acquisition by interns of in-depth systematized theoretical knowledge and professional skills in the field of early and differential diagnosis, clinical presentation, treatment and prevention of spread in diseases of the temporomandibular joint (TMJ) with deformations of the dentition and bite.**

8. Contents of the discipline: Organization of medical care for diseases requiring orthopedic treatment. Etiology, classification, clinical manifestations, diagnosis, treatment and prevention of defects in the dentition, bite.. Modern diagnostic methods in the clinic of orthopedic dentistry..

9. Objectives: Formation of knowledge among interns on orthopedic treatment for periodontal diseases, oncological diseases of the oral mucosa (OM), temporomandibular joint (TMJ) with deformations of the dentition and bite, - Formation of professional competence among interns by teaching the basics of clinical thinking, ability to conduct an examination, substantiate a diagnosis, develop a plan for the management of orthopedic patients and master basic manual skills when conducting orthopedic treatment of diseases of the temporomandibular joint (TMJ).

- Formation of analytical work skills: the use of modern scientific data based on the principles of evidence-based medicine when conducting research work on the problems of tropical infectious diseases.

10. Justification for choosing the discipline:

Modern methods of examining patients in orthopedic dentistry. Clinical and laboratory stages of manufacturing onlay inlay overlay pinlay veneers. Orthopedic treatment of dentition defects using the SAD-SAM systems technique. Features of prosthetics on dental implants. Interdisciplinary dentistry. Gnathology.

11. Learning outcomes (4-6 learning outcomes in accordance with Dublin descriptors)

<b>Knowledge (cognitive sphere)</b>	<b>Skills and abilities (psychomotor area)</b>	<b>Personal and professional competencies (relationships)</b>
<p>Know:</p> <ul style="list-style-type: none"> <li>- history of development and modern directions of scientific research in the field of orthopedic dentistry;</li> <li>- Principles of organizing orthopedic dental care for diseases of the maxillofacial region - Etiology, epidemiology, pathogenesis, clinical picture and classification defects of teeth, dentition, bite,</li> <li>-Modern diagnostic methods in an orthopedic dentistry clinic.</li> </ul>	<ul style="list-style-type: none"> <li>• Be able to:</li> <li>-Examine a patient with traumatic occlusion and dental diseases and, if necessary, provide emergency medical care; in accordance with established rules.</li> <li>-Evaluate the differential diagnostic significance of symptoms and syndromes characteristic of diseases of dentofacial pathology.</li> <li>-draw up a plan for the necessary laboratory and instrumental examinations,</li> <li>-interpret the results of laboratory and instrumental examination of the patient;</li> </ul>	<p>general cultural (GC): ability for abstract thinking, analysis, synthesis - (GC-1);</p> <ul style="list-style-type: none"> <li>- general professional competences (GPC): the ability to assess morphofunctional, physiological states and pathological processes in the human body to solve professional problems (GPC-9);</li> <li>- professional competencies (PC): readiness to collect and analyze the patient’s complaints, his medical history, examination results, laboratory, instrumental,</li> </ul>

<p>-Basic principles and modern methods of orthopedic treatment of defects of hard tissues of teeth and dentition. Modern non-removable orthopedic structures.</p>	<p>- Defects of the maxillofacial region and their orthopedic treatment. Myogymnastics and mechanotherapy in the treatment of patients with defects of the maxillofacial region. and their subsequent rehabilitation, taking into account the etiology, severity of the disease and associated pathological conditions Possess skills: -carrying out algorithms for early and differential diagnosis; - choose a treatment method and design of prostheses and devices; -treat traumatic occlusion and TMJ diseases; -obtain impressions, cast models; -determine the central relationship of the jaws; -construct artificial teeth; -fit and apply orthodontic and orthopedic structures; -prevent, recognize and eliminate ethical and deontological problems when communicating with patients and medical personnel;</p>	<p>pathological, anatomical and other studies in order to recognize the condition or establish the presence or absence of the disease; ability to determine tactics for managing patients with various nosological forms.</p>

12. Пререквизиты

Клиническая ортопедическая стоматология-2.

13. Постреквизиты

циклы усовершенствования врачей по ортопедической стоматологии.

14. Литература:

1. 1. О.Р.Курбанов, А.И.АбдурахмановС.И.Абакаров М.:ГЭОТАР-Медиа, 2015. Ортопедическая стоматология.

2. Аболмасов Н.Г., Аболмасов Н.Н., Бычков В.А., Аль-Хаким А. Ортопедическая стоматология М, 2017.

Дополнительная:

1. Рузуддинов С.Р., Темирбаев М.А., Алтынбеков К.Д. Ортопедическая стоматология., Алматы, 2010./

1. **Department: “Surgical and orthopedic dentistry”**
2. **Level of training: internship**
3. **Specialty: 6B10103 “Dentistry”**
4. **Course: 6**
5. **Name of the elective discipline: “Physiotherapeutic rehabilitation of patients in the clinic of surgical dentistry.”**
6. **Number of credits: 5**
7. **Purpose: To familiarize students with the basic principles of physiotherapeutic treatment of dental diseases, its role in the complex treatment, prevention and diagnosis of major dental diseases.**
8. **Contents of the discipline: Current problems at the present stage. Formation of special knowledge and skills in the practical application of physical methods in practice, based on knowledge of the peculiarities of the mechanism of action of physical factors on the body and the clinical course of dentistry. Developing students’ skills in deontology and ethics of behavior at a clinical appointment.**
9. **Tasks:**
  - Study of the theoretical foundations of physiotherapy
  - Study of the mechanism of action of physical factors, based on the patterns of development of pathological processes in the maxillofacial area.
  - Acquisition by the student of practical skills in the use of modern methods of physiotherapy in the clinic of surgical and orthopedic dentistry
  - Formation of ideas about the principles of medical ethics and deontology.
10. **Justification for choosing the discipline:**
  - equipment and methods of working on galvanic devices; - galvanization and electrophoresis of acute inflammatory diseases of the maxillofacial area, diseases of the joints, salivary glands; - methods of electroodontodiagnosis of hard dental tissues;
  - UHF therapy technique for tissues of the maxillofacial area; - technique and methodology for ultrasound therapy and ultraphonophoresis; - techniques and methods of irradiation of the maxillofacial area during light therapy (UV irradiation, laser radiation).
11. **Learning outcomes (4-6 learning outcomes according to Dublin descriptors)**

<b>Knowledge (cognitive sphere)</b>	<b>Skills and abilities (psychomotor area)</b>	<b>Personal and professional competencies (relationships)</b>
1. Know: - classification, etiology, pathogenesis, clinical picture, diagnostic methods, - prevention and complex treatment, methods of rehabilitation of patients in a surgical dentistry clinic; - physical factors, the mechanism of their biological, physiological and therapeutic action; - organizing the work of a physiotherapy room, department; - indications and contraindications for physiotherapeutic treatment;	2. Be able to: - determine indications and feasibility, choose the best option for prescribing a method of physiotherapy for surgical diseases, - choose adequate methods of physiotherapy for the diagnosis and treatment of diseases, take into account deontological problems when making decisions, - evaluate the results of treatment, - carry out resuscitation and first aid techniques in emergency conditions, in dental practice and other emergency	- professional competencies (PC): - Demonstrates skills in diagnosis, treatment, prevention and dynamic monitoring of patients with the most common dental diseases at a surgical appointment (RO 1) - Applies skills in providing surgical dental and emergency medical care, including first aid and resuscitation to patients of all age groups. (RO-2); - general cultural (GC): ability for abstract thinking, analysis, synthesis – (GC-1);

<ul style="list-style-type: none"> <li>- the main devices used for physiotherapeutic treatment at a dental appointment;</li> <li>-know physiotherapeutic methods of application, dosages of therapeutic physical factors for physiotherapeutic treatment of diseases in a dental surgery clinic;</li> <li>- safety precautions for the operation of physiotherapeutic devices;</li> <li>- methods of providing first aid in case of electric shock, laser, ultraviolet radiation, etc.</li> <li>-principles of medical ethics and deontology;</li> <li>-causes of errors and complications in the physiotherapeutic treatment of this pathology, methods of their identification, elimination and prevention</li> </ul>	<p>situations; - identify a condition requiring emergency dental and medical care that is beyond the competence of a general dentist, and immediately contact the appropriate specialists;</p> <p>- carry out prevention and treatment of diseases using physiotherapeutic methods.</p>	<p>- general professional competencies (GPC): the ability to assess physiological conditions and pathological processes in the human body to solve professional problems);</p>

12. Prerequisites: Oncostomatology.

13. Postrequisites: Internship in the specialty of surgical dentistry.

14. Literature:

1. Sagyndyk Kh.L. Inflammatory diseases of tissues of the maxillofacial region and neck: textbook / Kh. L. Sagyndyk, A. M. Sumanova, Z. A. Paizieva. - Karaganda: Medet Group, 2021.
2. Sagyndyk Kh.L. Fundamentals of dental implantology: educational manual / Kh. L. Sagyndyk, A. A. Sugurbaev. - Karaganda: Medet Group, 2021.
3. Surgical dentistry: textbook / ed. V.V. Afanasyeva. - 3rd ed., revised. - M.: GEOTAR - Media, 2019

**1. Department: Surgical and orthopedic dentistry**

**2. Level of training: internship**

**3. Specialty: “Dentistry”**

**4. Course: 6**

**5. Name of the elective discipline “Clinical and physiological aspects of the maxillofacial region”**

**6. Number of credits: 5**

**7. Goal: acquisition by interns of in-depth, systematized theoretical knowledge and professional skills in the field of early and differential diagnosis, clinic, treatment and prevention of dentition defects and students obtaining systemic theoretical and applied knowledge about dental (dental) implantology**

**8. Contents of the discipline:**

History of the development of dental implantology. Regulatory and legal framework.

Causes of bone loss in the area of missing teeth and their consequences. The problem of choosing an implant or a bridge, arguments for and against. The phenomenon of osseointegration. Anatomical prerequisites for dental implantation. The phenomenon of osseointegration, factors influencing the optimization of this process. Morphological features of the bone-implant contact zone. Types of defects and deformations of the alveolar part of the jaws. Indications and contraindications for use

dental implants. Diagnostics and implantation planning, instruments, treating patients using dental implants.

. 9. Tasks:

1. Formation of a system of knowledge among interns in the field of general and specific issues of the current stage of development of dental implantology.

2. Master the algorithm for planning and predicting the results of implant treatment.

3. Master the basic surgical techniques of dental implantation.

4. Formation and development of interns' skills in the treatment of complications of implant treatment and analytical work: the use of modern scientific data based on the principles of evidence-based medicine when conducting research work on the problems of dental implantation

10. Justification for choosing the discipline: Preparation for dental implantation. The concept of osseointegration. Osseointegration during dental implantation: the concept of distant and contact osteogenesis. Features of the jaw bone structure, classification of bone density. Indications for dental implantation. Contraindications to dental implantation. Clinical assessment of the condition of the oral cavity: condition of the teeth, condition of the oral mucosa for the possibility of dental implantation. Types of implants, Composition of dental implants. Features of surgical interventions on the upper and lower jaw with

dental implantation. Complications of dental implantation.

11. Learning outcomes (4-6 learning outcomes in accordance with Dublin descriptors)

<b>Knowledge (cognitive sphere)</b>	<b>Skills and abilities (psychomotor area)</b>	<b>Personal and professional competencies (relationships)</b>
<p>Must know:</p> <ul style="list-style-type: none"> <li>- features of the organization of the process of implantological treatment of patients with dentition defects;</li> <li>- medication support and instrumental support for implantological treatment;</li> <li>- modern methods for diagnosing the condition of the jaw bones;</li> <li>- morphological aspects of osseointegration;</li> <li>- algorithm for planning and carrying out treatment and rehabilitation measures using dental implants of various designs;</li> <li>- modern osteoplastic materials used in dental implantology;</li> </ul>	<p>Should be able to:</p> <ul style="list-style-type: none"> <li>- justify the feasibility of implantological treatment;</li> <li>- formulate indications and contraindications for implantation;</li> <li>- determine the sequence planned stages of treatment;</li> <li>- assess the volume and type of bone tissue in the area of upcoming implantation;</li> <li>- explain to the patient the advisability of performing reconstructive operations aimed at restoration of alveolar bone and soft tissue in the implantation area.</li> </ul> <p>Must own:</p> <ul style="list-style-type: none"> <li>- prescribe diagnostic measures as part of planning implant treatment;</li> <li>- determine indications and contraindications for</li> </ul>	<p>general cultural (GC): ability for abstract thinking, analysis, synthesis - (GC-1);</p> <ul style="list-style-type: none"> <li>- general professional competences (GPC): the ability to assess morphofunctional, physiological states and pathological processes in the human body to solve professional problems (GPC-9);</li> <li>- professional competencies (PC): readiness to collect and analyze the patient's complaints, his medical history, examination results, laboratory, instrumental, pathological, anatomical and other studies in order to recognize the condition or establish the presence or absence of the disease;</li> </ul>

<ul style="list-style-type: none"> <li>- indications and contraindications for treating patients using dental implants;</li> <li>- surgical protocols for various implantation techniques;</li> <li>- indications, types and methods of reconstructive operations during implantological treatment;</li> <li>- stages of rehabilitation after implant treatment.</li> </ul>	<p>treatment using dental implants. medication support and instrumental support for implantological treatment;</p> <ul style="list-style-type: none"> <li>- modern methods for diagnosing the condition of the jaw bones;</li> <li>- morphological aspects of osseointegration;</li> <li>- algorithm for planning and carrying out treatment and rehabilitation measures using dental implants of various designs;</li> </ul>	<p>ability to determine tactics for managing patients with various nosological forms.</p>

## 12. Prerequisites

Surgical dentistry

## 13. Post-requisites

Aesthetic and digital prosthetic dentistry.

## 14. Literature:

1. Sagyndyk Kh.L. Fundamentals of dental implantology: educational manual / Kh. L. Sagyndyk, A. A. Sugurbaev. - Karaganda: Medet Group, 2021.

2. Surgical dentistry: textbook / ed. V.V. Afanasyeva. - 3rd ed., revised. . - M.: GEOTAR - Media, 2019

Additional:

1. Maxillofacial surgery: textbook / ed. A.Yu. Drobysheva, O.O. Yanushevich. - M.: GEOTAR - Media, 2018

2. Duiseeva G.Sh. Modern aspects of pain and local anesthesia in dentistry: textbook / G.Sh. Duiseeva, S.R. Ruzuddinov. - Alma-Ata: New book, 2019.

Orazalin, Zh. B. Surgical dentistry: okulyk / Zh. B. Orazalin, K. T. Toleuov. - Almaty: Bilim, 1998.,

**1. Department:**Therapeutic and pediatric dentistry

**2. Level of training:**Internship

**3. Speciality:**6B10103-"Dentistry"

**4. Well:**6

**5. Name of elective discipline:**Periodontal diseases

**6. Amount of credits:**7 credits (210 hours)

**7. Target:**Preparation of a dentist necessary for the independent work of a dentist in an outpatient facility to provide specialized periodontal care to the population in compliance with the basic requirements of medical ethics and deontological principles.

**8. Tasks:**

- Proper treatment of children with carious lesions of permanent teeth;
- Maximize the vitality of the pulp of permanent teeth in children;
- Provide quality treatment for vital amputation.

**9. Contents of the discipline.**Acquiring theoretical and practical knowledge in the field of periodontology, studying modern aspects of the etiology and pathogenesis of periodontal diseases, studying the features of examining patients with periodontal diseases, mastering the basics of diagnosis and treatment of periodontal diseases, familiarizing with complications in the treatment

of periodontal diseases and methods for their elimination, familiarization with the principles organization and operation of a periodontology clinic.

**10. Justification for choosing the discipline:**In recent years, in pediatric endodontic practice, in the treatment of permanent teeth with immature roots, lost pulp, and with a wide apex, temporary filling of root canals after thorough cleaning with non-hardening pastes based on calcium hydroxide has become increasingly popular to stimulate the formation of calcified tissue in the apex area. Therefore, the practical doctor is required to know the age-related anatomy and physiology of the child; the ability to determine the timing of teething and choose methods of disease prevention, conservative or surgical treatment; the ability to promptly recognize developmental defects and prevent further development of anomalies and deformations of the dental system.

**11. Learning outcomes (competencies):**

<b>LO 1</b>	Demonstrates knowledge and understanding of the etiology and pathogenesis of periodontal disease. Applies scientific principles, methods and knowledge to medical dental practice and research. Capable of continuous self-education and development.
<b>LO 2</b>	Classifies, makes a preliminary and final diagnosis of patients with periodontal diseases based on data from basic and additional examination methods.
<b>LO 3</b>	Conducts differential diagnosis of periodontal diseases and determines the relationship with other diseases of the body as a whole.
<b>LO 4</b>	Provides treatment and prevention of major periodontal diseases in patients of all age groups, including pregnant women and women planning pregnancy.
<b>LO 5</b>	Conducts comprehensive treatment of periodontal diseases, draws up a comprehensive treatment plan, including dynamic observation and clinical examination of patients with periodontal diseases. Demonstrates entrepreneurial skills in organizing a dental service. Able to work in conditions of compulsory medical insurance.

**12. Prerequisites:**Fundamentals of therapeutic dentistry, diseases of the oral mucosa, therapeutic dentistry, oral surgery -1,2

**Post-requisites: training cycles for doctors in periodontology**

**13. Literature:**

**Main:**

1. Dmitriev A.A. Treatment and prevention of dental and periodontal diseases. – 2008.
2. Maksimovsky Yu.M. Therapeutic dentistry - M., 2009.
3. Nikolaev A.I., Tsepov L.M. Practical therapeutic dentistry. – M.: MEDpress-inform, 2012.
4. Therapeutic dentistry: Textbook. In 3 parts/Ed. G.M. Barera.- M.; GEOTAR-Media. Part 3: Diseases of the oral mucosa. - 2014.
5. Therapeutic dentistry: Textbook. In 3 parts/Ed. G.M. Barera.- M.; GEOTAR-Media. Part 2: Periodontal diseases. -2012.

**Additional:**

1. Greenhalgh T. Fundamentals of evidence-based medicine. Per. from English - M.:[GEOTAR-Media](#), 2006. - 240 p.
2. Zazulevskaya L.Ya. Practical periodontology. – Almaty, 2006.  
Zazulevskaya L.Ya. Diseases of the oral mucosa. –Almaty, 2010.

**1. Department:**Therapeutic and pediatric dentistry

**2. Level of training:**Internship

**3. Speciality:**6B10103-"Dentistry"

**4. Well:6**

**5. Name of elective discipline:**Orthodontics

**6. Amount of credits:**7 credits (210 hours)

**7. Target:**Functional methods for studying dentofacial anomalies. Digital diagnostic technologies in orthodontics. Differential diagnostic criteria and methods of treatment of anomalies of tooth position and anomalies of dentition in the deciduous permanent dentition. Modern digital methods of treating dentofacial anomalies. Aligners. Orthodontic treatment with fixed techniques.

**8. Tasks:**

- Violation of facial symmetry;
- Abnormal displacement of the jaw;
- Pathologies associated with breathing;
- Difficulty chewing food and speaking;
- Clicking when the jaw moves in the mouth;
- Violation of the position of teeth in the oral cavity;
- Various bite defects.

**9. Contents of the discipline.**Training of an orthodontist capable of providing qualified medical care to a child with dentofacial anomalies of the teeth, dentition and bite in accordance with the principles of evidence-based medicine and modern achievements of diagnostic and treatment technologies.

**10. Justification for choosing the discipline:**In recent years, in pediatric endodontic practice, in the treatment of permanent teeth with immature roots, lost pulp, and with a wide apex, temporary filling of root canals after thorough cleaning with non-hardening pastes based on calcium hydroxide has become increasingly popular to stimulate the formation of calcified tissue in the apex area. Therefore, the practical doctor is required to know the age-related anatomy and physiology of the child; the ability to determine the timing of teething and choose methods of disease prevention, conservative or surgical treatment; the ability to promptly recognize developmental defects and prevent further development of anomalies and deformations of the dental system.

**11. Learning outcomes (competencies):**

<b>5.</b>	<b>Final learning outcomes (RO disciplines)</b>
<b>LO1</b>	□ Compiles medical history and other medical records (referrals to other departments, conclusions, etc.). Masters the clinical method of examining patients: collecting anamnesis, external examination of the face, oral cavity, analysis of the condition of the soft tissues of the face and oral cavity, condition of the teeth, their position, shape of the dentition, type of occlusion, assessing the state of functions in the



	dentofacial area, the condition of the temporomandibular region. mandibular joints.
<b>LO2</b>	□ Possesses diagnostic skills used in the examination of orthodontic patients - taking impressions of the jaws, casting them into the base to obtain diagnostic and working models of the jaws, conducting biometric studies on models of the jaws, radiological research methods - studying targeted images, orthopantomograms, TRG of the head, radiographs of the hands .
<b>LO3</b>	□ Interprets the examination results to make a complete orthodontic diagnosis, determines the severity of the pathology and the degree of difficulty of its treatment; knows the planning and tactics of orthodontic treatment (volume, timing).
<b>LO4</b>	□ Uses hardware methods for orthodontic and complex treatment of dentofacial anomalies, knows the design features of removable and non-removable intraoral appliances and indications for their use
<b>LO5</b>	-Complies with the principles of medical ethics and deontology, is ready to implement the ethical and deontological aspects of medical practice in communicating in three languages with colleagues, nurses and junior staff, patients and their relatives and forms methods of psychological and pedagogical persuasion for patients of different age groups
<b>LO6</b>	Uses digital technologies in diagnosis, treatment and organization of dental services.
<b>LO7</b>	Uses modern management and marketing technologies in his professional activities, analyzes the quality and effectiveness of his work. Demonstrates entrepreneurial skills in organizing a dental service. Able to work under compulsory health insurance conditions
<b>LO8</b>	Applies scientific principles, methods and knowledge to medical practice and research. Capable of continuous self-education and development.

**12.Prerequisites:**“Propaedeutics of Orthodontics”, “Clinical Orthodontics”,  
**Post-requisites: cycles of improvement for doctors in orthodontics.**

**13.Literature:**

**Main:**

William R. Profit. Modern orthodontics.-M., 2019.

Ravinda Nanda Atlas of Clinical Orthodontics-M., 2019

O.I. Arsenina Treatment of patients with dentoalveolar anomalies and functional disorders using elatocorrector-M., 2017

William J. Clark Orthodontic treatment with paired blocks – M., 2019

Cameron A. Handbook of Pediatric Dentistry 2003. (edited by T.F. Vinogradova)

Khoroshilkina F.Ya., Persin L.S. Orthodontic treatment of dentofacial anomalies with modern orthodontic devices. M. 1999.

Persin L.S. Orthodontics.-2004.

Khoroshilkina F.Ya. Orthodontics. M., 2005.-454 p.

Trezubov V.N. Orthodontics 2005.-145 s.

Distel V.A., Suntsov V.G., Wagner V.D. Fundamentals of orthodontics.-M., 2001.-244 p.

Distel V.A., Suntsov V.G., Wagner V.D. Dental anomalies and deformations.-M., 2001.-102 p.

Additional:

1. Bennett D. Mechanics of orthodontic treatment using the straight arch technique. 2001 –265.
2. Tugarin V.A. Modern fixed orthodontic technology Edgewise. 1996.-220 pp.
3. Distel V.A. Dental anomalies and deformations, 2001.-142 p.
5. www.Internet work with Internet resources. You type.
6. Persin L.S. Orthodontics. Diagnosis, types of dental anomalies. Second edition, supplemented.-M.: Publishing house "Ortodent-Info", 1999-271 p.
7. Sharova T.V., Rogozhnikov G.I. Orthopedic dentistry for children.-M., 1991.-288 p.
8. Shmut G.P., Holetgrave E.A., Dremer D. Practical orthodontics. - M., 2002.
9. Khoroshilkina F.Ya., Persin L.S. Orthodontics. Volume 1.-M., 1999.
10. Khoroshilkina F.Ya., Persin L.S. Orthodontics. Volume 2.- M., 1999.
11. Khoroshilkina F.Ya., Persin L.S. Orthodontics. Volume 3.-. M. 2001

- 1. Department:**Therapeutic and pediatric dentistry
- 2. Level of training:**Internship
- 3. Speciality:**6B10103-"Dentistry"
- 4. Well:**6
- 5. Name of elective discipline:**Pediatric dentistry
- 6. Amount of credits:**8 credits (240 hours)
- 7. Target:**Training of a dentist who has the necessary amount of knowledge, skills and practical skills, capable of independently providing qualified dental care to children and adolescents with diseases of the oral cavity in accordance with the principles of evidence-based medicine and modern achievements of diagnostic and treatment technologies, ready for continuous improvement and professional growth .
- 8. Tasks:**
  - Proper treatment of children with carious lesions of permanent teeth;
  - Maximize the vitality of the pulp of permanent teeth in children;
  - Provide quality treatment for vital amputation.
- 9. Contents of the discipline.**Methods for examining the oral cavity and maxillofacial area in a child. Clinical examination. Features of clinical

manifestations of diagnosis and modern methods of treatment of carious non-carious lesions in children. Features of clinical manifestations and treatment of inflammatory diseases of the pulp and periodontium. Tooth extraction surgery in children. Viral and fungal diseases of the oral mucosa in children.

**10. Justification for choosing the discipline:** In recent years, in pediatric endodontic practice, in the treatment of permanent teeth with immature roots, lost pulp, and with a wide apex, temporary filling of root canals after thorough cleaning with non-hardening pastes based on calcium hydroxide has become increasingly popular to stimulate the formation of calcified tissue in the apex area. Therefore, the practical doctor is required to know the age-related anatomy and physiology of the child; the ability to determine the timing of teething and choose methods of disease prevention, conservative or surgical treatment; the ability to promptly recognize developmental defects and prevent further development of anomalies and deformations of the dental system.

**11. Learning outcomes (competencies):**

<b>PO1</b>	Masters the clinical method of examining patients: collecting anamnesis, external examination of the face, oral cavity, analyzes the condition of the soft tissues of the face and oral cavity, the condition of the teeth, their position, the shape of the dentition, type of occlusion, assesses the state of the anatomical and morpho-functional features of the oral cavity, salivary glands and temporomandibular joint in childhood.
<b>PO2</b>	Possesses the skills of diagnosing and examining children and adolescents with diseases of the hard tissues of the tooth, pulp, periodontium, parodontium, oral mucosa, tongue and red border of the lips, demonstrates the skills of examining children and adolescents with diseases and traumatic injuries of the oral cavity, salivary glands and temporomandibular joint;
<b>PO3</b>	Applies and interprets research data on the hygienic state of the oral cavity: GI, Schiller-Pisarev test, PMA index, Russel index; interprets the results of the reaction to temperature stimuli in diseases of the hard tissues of teeth, pulp, periodontium, and periodontal disease in children and adolescents; Thermal test results for diseases of dental hard tissues.
<b>PO4</b>	Proficient in methods of conducting local application, infiltration and conduction anesthesia in children and adolescents, forms cavities of various locations for various types of filling materials and methods of restoration of hard dental tissues in children and adolescents. Conducts therapeutic measures to eliminate complications associated with the treatment of caries, pulpitis and periodontitis (closing perforations,

	temporary filling of the root canal, prescribing medications) in children and adolescents
<b>PO5</b>	Complies with the principles of medical ethics and deontology, is ready to implement the ethical and deontological aspects of medical practice in communicating in three languages with colleagues, nurses and junior staff, patients and their relatives and forms methods of psychological and pedagogical persuasion for patients of different age groups
<b>PO6</b>	Uses digital technologies in diagnosis, treatment and organization of dental services.
<b>PO7</b>	Uses modern management and marketing technologies in his professional activities, analyzes the quality and effectiveness of his work. Demonstrates entrepreneurial skills in organizing a dental service. Able to work under compulsory health insurance conditions
<b>PO8</b>	Applies scientific principles, methods and knowledge to medical practice and research. Capable of continuous self-education and development;

**12.Prerequisites:**Pediatric dentistry, bachelor's degree, prevention of dental diseases

**Postrequisites: Improvement cycles for doctors in pediatric dentistry**

**13.Literature:**

1. Pediatric therapeutic dentistry. Edited by RAS V.K. Leontyev, Kiselnikova L.P. ., 2017, pp. 530-546. 2. Pediatric dentistry. Part 1. Elizarova V.M., Therapy., 2016, Geotar Media publishing house. pp. 241-287.

**Additional literature:**1. Lectures on pediatric dentistry. T1: Training manual. / Edited by T.K. Supiev. - Ed. 2nd, revised and additional - Almaty: "Tau-Samal", 2013. - 436. 2. Propaedeutic dentistry: Textbook / Edited by E.A. Bazikyan, O.O. Yanushevich. - 2nd ed., revised. and additional - M.: GEOTARMEDIA, 2016.- 640 pp.: ill. 3. Supiev T.K., R.I. Yu., "Morphofunctional features of the maxillofacial region in children and adolescents": textbook / Almaty, 2013. - 1357.

**Catalog of elective disciplines for the 2024-2025 academic year**

- 1. Department:**Therapeutic and pediatric dentistry
- 2. Level of training:**Internship

3. **Speciality:**6B10103-"Dentistry"
4. **Well:**6
5. **Name of elective discipline:**Therapeutic dentistry and digital technologies
6. **Amount of credits:**8 credits (240 hours)
7. **Target:**The main objective of internship training is to prepare specialists for independent work in health authorities and organizations or private practice. A dentist must be a highly specialized specialist capable of meeting the needs of society when providing therapeutic dental care to the adult population, applying and developing advanced innovative technologies in therapeutic dentistry, science and practice, using advances in information and communication technologies, and strengthening the health of the population. Persons who have not completed an internship are not allowed to participate in clinical practice. The training of interns is carried out in accordance with the Law "On Education".
8. **Tasks:**
  - Proper treatment of children with carious lesions of permanent teeth;
  - Maximize the vitality of the pulp of permanent teeth in children;
  - Provide quality treatment for vital amputation.
9. **Contents of the discipline.**Caries and its complications. Traumatic lesions. Allergic diseases of the oral mucosa. Changes in the oral mucosa during exogenous intoxication and hypovitaminosis. Cheilitis. Precancerous diseases of the oral mucosa and red border of the lips. Dental focus of infection.
- 10.**Justification for choosing the discipline:**In recent years, in pediatric endodontic practice, in the treatment of permanent teeth with immature roots, lost pulp, and with a wide apex, temporary filling of root canals after thorough cleaning with non-hardening pastes based on calcium hydroxide has become increasingly popular to stimulate the formation of calcified tissue in the apex area. Therefore, the practical doctor is required to know the age-related anatomy and physiology of the child; the ability to determine the timing of teething and choose methods of disease prevention, conservative or surgical treatment; the ability to promptly recognize developmental defects and prevent further development of anomalies and deformations of the dental system.

### 11.Learning outcomes (competencies):

<b>LO1</b>	Conducts diagnostics of dental diseases using basic and additional research methods.
<b>LO2</b>	Conducts diagnostics and treatment methods for inflammatory diseases of the pulp and periodontium. Knows how to apply modern methods and materials in endodontic practice.
<b>LO3</b>	Conducts diagnostics, differential diagnosis of periodontal diseases and oral mucosa and treatment using modern technologies and methods.

<b>LO4</b>	Knows and is able to identify manifestations of obligate and facultative cancer diseases in the oral cavity.
<b>LO5</b>	Conducts diagnosis and treatment of viral, allergic, traumatic, fungal infections of the oral cavity.
<b>LO6</b>	Knows how to identify manifestations of specific infections in the oral cavity and conducts differential diagnostics using modern technologies and methods (syphilis, tuberculosis).
<b>LO7</b>	Uses scientific principles, methods and knowledge in medical practice and research. Capable of continuous education and development.
<b>LO8</b>	Complies with the principles of medical ethics and deontology, is ready to implement the ethical and deontological aspects of medical practice in communicating in three languages with colleagues, nurses and junior staff, patients and their relatives, and forms methods of psychological and pedagogical persuasion for patients of different age groups.

**12.Prerequisites:**Clinical endodontics, periodontology, diseases of the oral mucosa

**Postrequisites: periodontics, endodontics**

**13.Literature:**

1. Pediatric therapeutic dentistry. Edited by RAS V.K. Leontyev, Kiselnikova L.P. ., 2017, pp. 530-546. 2. Pediatric dentistry. Part 1. Elizarova V.M., Therapy., 2016, Geotar Media publishing house. pp. 241-287.

**Additional literature:**1. Lectures on pediatric dentistry. T1: Training manual. / Edited by T.K. Supiev. - Ed. 2nd, revised and additional - Almaty: "Tau-Samal", 2013. - 436. 2. Propaedeutic dentistry: Textbook / Edited by E.A. Bazikyan, O.O. Yanushevich. - 2nd ed., revised. and additional - M.: GEOTARMEDIA, 2016.- 640 pp.: ill. 3. Supiev T.K., R.I. Yu., "Morphofunctional features of the maxillofacial region in children and adolescents": textbook / Almaty, 2013. - 1357.

### **Catalog of elective disciplines for the 2024-2025 academic year**

- 1. Department:**Therapeutic and pediatric dentistry
- 2. Level of training:**Internship
- 3. Speciality:**6B10103-"Dentistry"
- 4. Well:**6
- 5. Name of elective discipline:**Endodontics
- 6. Amount of credits:**5 credits (150 hours)

**7. Target:** Formation in students of knowledge of the topography of the dental cavity, the principles of preparation of the dental cavity and root canals using modern tools and techniques, materials for filling root canals, the fundamentals of dental materials science and endodontics.

**8. Tasks:**

- prevention of inflammatory processes in the tissues surrounding the tooth;
- elimination of the source of inflammation in the root canal;
- sanitation of the root canal and its high-quality obturation.

**9. Contents of the discipline.** Diseases of the pulp and periodontium. Classification. Etiology. Clinic. Differential diagnosis and treatment. Classification of instruments used at various stages of endodontic treatment. Modern equipment necessary for high-quality endodontic procedures. Mechanical treatment of root canals using the Stap Back (step back) and CrownDown (balanced force) methods.

**10. Justification for choosing the discipline:** Endodontics is a root canal treatment procedure. Dentists perform it in cases where the tooth is affected by deep caries, inflammation or infection that has reached the pulp. All the doctor's efforts are aimed at saving the tooth from removal. Endodontics is also important for the overall health of the patient, since infection and inflammation in the tooth lead to serious complications - abscess, osteomyelitis and even heart disease.

**11. Learning outcomes (competencies):**

5.	Final learning outcomes (RO disciplines)
LO1	Applies acquired knowledge from prerequisites: anatomy, pathological anatomy of the neck and head, general surgery, pathophysiology, surgical diseases in endodontics.
LO2	Conducts differential diagnosis of caries complications. Draws up a treatment plan for caries complications.
LO3	Provides first aid for acute forms of pulp and periodontal diseases.
LO4	Performs techniques for creating endodontic access, mechanical treatment of root canals using the Stap Back “step back” and “CrownDown” methods using the “balanced force method”, medicinal treatment of the root canal system, obturation of the root canal system, tooth restoration.
LO5	Conducts the prevention of caries and its complications, medical examination and rehabilitation of patients with pulp and periodontal diseases.

LO6	Performs presentations correctly and accurately as required using literature and computer technology.
LO7	Complies with the principles of medical ethics and deontology, is ready to implement the ethical and deontological aspects of medical practice with colleagues, nurses and junior staff, patients and their relatives, and forms methods of psychological and pedagogical persuasion for patients with pulp and periodontal diseases. Recognizes team values.
LO8	Applies knowledge of non-medical, biomedical, clinical, social and behavioral sciences to practice. Shares received and accepted information and knowledge, correctly perceives received tasks, and responds adequately to actions.

**12.Prerequisites:**Therapeutic dentistry, pediatric dentistry.

**Post-requisites: cycles of improvement for doctors in endodontics.**

### **13.Literature:**

#### **Main:**

William R. Profit. Modern orthodontics.-M., 2019.

Ravinda Nanda Atlas of Clinical Orthodontics-M., 2019

O.I. Arsenina Treatment of patients with dentoalveolar anomalies and functional disorders using elatocorrector-M., 2017

William J. Clark Orthodontic treatment with paired blocks – M., 2019

Cameron A. Handbook of Pediatric Dentistry2003. (edited by T.F. Vinogradova)

Khoroshilkina F.Ya., Persin L.S. Orthodontic treatment of dentofacial anomalies with modern orthodontic devices. M.1999.

Persin L.S. Orthodontics.-2004.

Khoroshilkina F.Ya. Orthodontics. M.,2005.-454 p.

Trezubov V.N. Orthodontics2005.-145 s.

Distel V.A., Suntsov V.G., Wagner V.D. Fundamentals of orthodontics.-M., 2001.-244 p.

Distel V.A., Suntsov V.G., Wagner V.D. Dental anomalies and deformations.- M., 2001.-102 p.

#### **Additional:**

1.Bennett D. Mechanics of orthodontic treatment using the straight arch technique. 2001 –265.

2. Tugarin V.A. Modern fixed orthodontic technology Edgewise. 1996.-220 pp.

3.Distel V.A. Dental anomalies and deformations, 2001.-142 p.

5.www.Internet work with Internet resources. You type.

6.Persin L.S. Orthodontics. Diagnosis, types of dental anomalies. Second edition, supplemented.-M.: Publishing house "Ortodent-Info", 1999-271 p.



7. Sharova T.V., Rogozhnikov G.I. Orthopedic dentistry for children.-M., 1991.-288 p.
8. Shmut G.P., Holetgrave E.A., Dremer D. Practical orthodontics. - M., 2002.
9. Khoroshilkina F.Ya., Persin L.S. Orthodontics. Volume 1.-M.,1999.
10. Khoroshilkina F.Ya., Persin L.S. Orthodontics. Volume 2.- M.,1999.
11. Khoroshilkina F.Ya., Persin L.S. Orthodontics. Volume 3.-. M. 2001