

**Thematic plan of independent work of the student
in the discipline "Therapeutic Dentistry" module "Endodontics"
for students of the educational program
of the specialty / area of training 31.05.03 Dentistry,
(specialist's level), form of study full-time
5rd-Years Students (Term IX) for the 2023-2024 academic year**

№	The topic of independent work	Hours (academic)
1	Endodontics¹	34
	<ul style="list-style-type: none"> • Electronic apexlocators in endodontics. The concept of a apical constriction. Resistant root canal shape. Working length determination of the root canal. Methods of working length determinationl. Types of apex locators. Apex locators with EDI and dentometer functions.² • Vertical root fractures and cracks in endodontically treated teeth. Definition of vertical root fractures. Causes and frequency of vertical root fractures in endodontically treated teeth. Clinic of vertical root fractures. Diagnostics ("bite test", radiography). Differential diagnosis. Prevention of vertical root fractures.² • Cone beam computed tomography in endodontics. CT scan in dentistry. CT in Endodontics: Evaluation of Root Canal Morphology. Diagnostics of the pathology of periapical tissues. Diagnosis of root fractures. Root resorption. Diagnostics of perforations.² • Lasers in endodontics. Classification of lasers. Neodymium laser. Erbium laser. Diode laser. The effect of laser radiation on microorganisms and dentin. Photodynamic therapy or light-activated therapy (LAT).² • Methods of magnification and illumination in endodontics. Concept of an operating microscope. The use of an operating microscope in diagnostics and endodontic treatment. Preparation of the microscope for work and its correct installation. Ergonomics of using an operating microscope. Magnification with dental loupes.² • Periradicular Surgery. Endodontic surgery (apicoectomy) Root apex resection. Operating microscope in endodontic surgery. Root apex closure materials. Ultrasonic tips for endodontic surgery. Root amputation. Hemisection. Corona-radicular separation.² 	
	Total	34

¹ -Subject

² - essential content (if necessary)

Considered at the meeting of the department of June 1, 2023, protocol No12

Head of the Department for Therapeutic
Dentistry, DSci, professor



I.V. Firsova

**Thematic plan of independent work of the student
in the discipline "Therapeutic Dentistry" module "Endodontics"
for students of the educational program
of the specialty / area of training 31.05.03 Dentistry,
(specialist's level), form of study full-time
5rd-Years Students (Term X), for the 2023-2024 academic year**

№	The topic of independent work	Hours (academic)
1	Endodontics: non-microbial endodontic lesions, restorative and regenerative endodontics¹	24
	<ul style="list-style-type: none"> • Non-microbial endodontic lesions. Radicular cyst. Foreign bodies in the apical periodontium. Bean granuloma. Cellulosic granuloma. • Regenerative endodontics. The concept of "regenerative endodontics". Pulp revascularization with clotted blood. Therapy with postnatal stem cells. Pulp implantation. Implantation of a cell scaffold (membrane) with stem cells. Introduction of scaffold with stem cells by injection. Method of three-dimensional printing of stem cells. Gene therapy.² • Anatomical features of the structure of teeth that are difficult for endodontic treatment. Anatomical structure of the first and second upper molars. Anatomical structure of the second lower molar. Anatomical structure of the lower premolars.² • Cement-osseous dysplasia of the jaws. Cemento-osseous dysplasia. Focal (focal) cemento-osseous dysplasia. Periapical cemento-osseous dysplasia. Florida cemento-bone dysplasia.² • Endosystems in dentistry. The problem of restoration of endodontically treated teeth. Indications and contraindications for the use of endosystems. The goals of restoring endodontically treated teeth with endosystems. Post classification. The structure of the post. Choice of post according to the tooth. Preparing for the installation of endosystems. Post installation. Errors and complications arising from the use of endosystems. Post extraction systems.² 	
	Total	24

¹ -Subject

² - essential content (if necessary)

Considered at the meeting of the department of June 1, 2023, protocol No12

Head of the Department for Therapeutic
Dentistry, DSci, professor



I.V. Firsova

**Thematic plan of independent work of the student
in the discipline "Therapeutic Dentistry" module "Periodontology"
for students of the educational program
of the specialty / area of training 31.05.03 Dentistry,
(specialist's level), form of study full-time
5rd-Years Students (Term IX), for the 2023-2024 academic year**

№	The topic of independent work	Hours (academic)
1	Etiology, pathogenesis, diagnose and treatment of periodontal diseases. Relationship between periodontal disease and systemic diseases¹	28
	<ul style="list-style-type: none"> • Relationship between periodontal disease and the risk of preterm birth and low birth weight. The problem of low birth weight. Causes of preterm birth and low birth weight. Periodontitis and adverse outcome of childbirth. The importance of treating periodontitis in preventing preterm birth and low birth weight.² • Relationship between periodontal disease and atherosclerosis. A possible biological scenario for the development of a relationship between periodontitis and systemic diseases. Results of epidemiological studies. Significance of the problem for healthcare professionals and society.² • The use of the "Vector" system for the treatment of periodontal diseases. Principles of operation of the Vector system. Areas of use. Advantages of the Vector system for the treatment of periodontal diseases.² • Periodontal disease and diabetes mellitus. Etiology and pathogenesis of inflammatory periodontal diseases. Etiology and pathogenesis of diabetes mellitus. Manifestations in the oral cavity of periodontal diseases against the background of diabetes mellitus. Features of the treatment of periodontal diseases in patients with diabetes mellitus. Clinical examination of patients with periodontal disease on the background of diabetes mellitus.² • Guided tissue regeneration in periodontology. Question history. Repair and regeneration of periodontal tissues. Types of wound healing in periodontology. Guided tissue regeneration and guided bone regeneration (GRT and GBR). periodontal membranes. Membrane classification. Membrane requirements. Membrane functions. Non-resorbable membranes: advantages and disadvantages. NRT technique using non-resorbable membranes. Resorbable membranes: natural and synthetic. Methods of application of biomembranes. Comparative characteristics of collagen and polymer membranes. Synthetic biomembranes.² • Regenerative treatment using matrix proteins, growth and differentiation factors. Growth and differentiation factors: platelet growth factor, insulin-like growth factor, transforming growth factor β, bone morphogenetic proteins, fibroblast growth factor. Mediator systems certified for practical use: platelet rich plasma (PBT), P-15, enamel matrix protein (Emdogain (EM)). Enamel matrix protein flap surgery. Regenerative treatment pros and cons.² 	

	<ul style="list-style-type: none"> • Methods for removing supra- and subgingival dental deposits. Periodontal instruments. Instruments with electric drive for removal of supragingival dental deposits and their application. Manual instruments for the removal of supragingival dental plaque and their application. Hand tools for cleaning and polishing the root - curettes. Power tools. Use of curette Gracey. Hand instruments (curettes) for problem areas. Treatment with Gracey curettes, method. Tool sharpening.² 	
	<ul style="list-style-type: none"> • Study of body reactions and risk assessment. Recording a periodontal chart. Digital periodontal charts (Florida Probe system). Genetic risk: IL-1 gene polymorphism test. Poor hygiene as a risk factor, bleeding on probing. Drawing up an individual risk profile. Periodontal charts I and II. Electronic patient record.² 	
	<ul style="list-style-type: none"> • Microbiology of inflammatory periodontal diseases. Dental plaque: a biofilm associated with the "host" organism. Macroscopic structure and composition of plaque. Plaque formation. Microscopic structure and physiological properties of plaque. Association of dental plaque microorganisms with periodontal diseases. Specific microbes of periodontal disease. Microorganisms associated with specific periodontal diseases. Significance of biofilm medium.² 	
	<ul style="list-style-type: none"> • Lasers in periodontology. Photodynamic therapy. Laser curettage.² 	
	<ul style="list-style-type: none"> • Pathogenesis of inflammatory periodontal diseases. Body reactions: mechanisms and participants. Non-specific, innate immunity is the first line of defense. Specific, acquired immunity is the second line of defense. Interaction of nonspecific and specific immunities. Cytokines. Eicosanoids are prostaglandins and leukotrienes. enzymatic mechanisms. Action of matrix metalloproteinases. risk of developing periodontitis. The susceptibility of the macroorganism. Genetic risk factors. Modifiable risk factors. Destruction of connective tissue, destruction of bone tissue.² 	
	<ul style="list-style-type: none"> • Electromechanical instruments for the removal of mineralized dental deposits. Instruments with electric drive for removal of supragingival dental deposits and their application. Ultrasonic scalers. Sound scalers. Device Vector. Air abrasive system.² 	
Total		28

¹ -Subject

² - essential content (if necessary)

Considered at the meeting of the department of June 1, 2023, protocol No12

Head of the Department for Therapeutic
Dentistry, DSci, professor



I.V. Firsova

**Thematic plan of independent work of the student
in the discipline "Therapeutic Dentistry" module "Periodontology"
for students of the educational program
of the specialty / area of training 31.05.03 Dentistry,
(specialist's level), form of study full-time
5rd-Years Students (Term X)
for the 2023-2024 academic year**

№	The topic of independent work	Hours (academic)
1	Periodontology¹	32
	• Patient's record	
	Total	32

¹ -Subject

² - essential content (if necessary)

Considered at the meeting of the department of June 1, 2023, protocol No12

Head of the Department for Therapeutic
Dentistry, DSci, professor



I.V. Firsova

**Thematic plan of independent work of the student
in the discipline "Therapeutic Dentistry"
module "Gerontostomatology and diseases of the oral mucosa"
for students of the educational program
of the specialty / area of training 31.05.03 Dentistry,
(specialist's level), form of study full-time
5rd-Years Students (Term IX), for the 2023-2024 academic year**

№	The topic of independent work	Hours (academic)
1	Changes in the oral mucosa in systemic diseases ¹	18
	<ul style="list-style-type: none"> • Changes in oral mucosa in diabetes mellitus: clinic, diagnosis, treatment. Etiology and pathogenesis of diabetes mellitus types 1 and 2. Changes in the oral mucosa in diabetes mellitus. Diagnostics. Treatment and prognosis.² • Changes in the oral mucosa in Urbach-Wiethe lipid proteinosis: clinic, diagnosis, treatment. Etiology of lipid proteinosis Urbach-Wiethe. Clinic. Changes in the oral mucosa in Urbach- Wiethe lipid proteinosis. Diagnostics. Treatment and prognosis.² • Changes in the oral mucosa in dysfunction of the gonads, disorders of the functional activity of the adrenal cortex. Clinic, diagnosis, treatment. Changes in oral mucosa in dysfunctions of the gonads, clinic, diagnosis, treatment. Changes in the oral mucosa in hyperfunction of the adrenal cortex, clinic, diagnosis, treatment. Changes in the oral mucosa in hypocorticism, clinic, diagnostics.² • Changes in the oral mucosa in kidney diseases: clinic, diagnosis, treatment. Changes in oral mucosa in acute renal failure. Changes in oral mucosa in chronic renal failure. Changes in oral mucosa in acute glomerulonephritis. Changes in oral mucosa in chronic glomerulonephritis. Treatment of diseases of the oral mucosa in diseases of the kidneys.² • Manifestations on the gums of diseases of the oral mucosa. Manifestations on the gums of bullous pemphigoid. Manifestations on the gums of acantholytic pemphigus. Manifestations on the gums of lichen planus. Manifestations on the gums of leukoplakia. Manifestations on the gum of a herpetic infection.² • Changes in oral mucosa in diseases of the thyroid and parathyroid glands: clinic, diagnosis, treatment. Changes in the oral mucosa in hyperthyroidism, clinic, diagnosis, treatment. Changes in the oral mucosa in hypothyroidism, clinic, diagnosis, treatment. Changes in the oral mucosa in hypoparathyroidism, clinic, diagnosis, treatment. Changes in the oral mucosa in hyperparathyroidism, clinic, diagnosis, treatment.² 	
	Total	18

¹ -Subject

² - essential content (if necessary)

Considered at the meeting of the department of June 1, 2023, protocol No12

Head of the Department for Therapeutic
Dentistry, DSci, professor



I.V. Firsova

**Thematic plan of independent work of the student
in the discipline "Therapeutic Dentistry"
module "Gerontostomatology and diseases of the oral mucosa"
for students of the educational program
of the specialty / area of training 31.05.03 Dentistry,
(specialist's level), form of study full-time
5rd-Years Students (Term X), for the 2023-2024 academic year**

№	The topic of independent work	Hours (academic)
1	Changes in the oral mucosa in dermatitis, genetically determined diseases of the oral mucosa, nevi and epithelial¹	54
	<ul style="list-style-type: none"> • Vasculitis. Acute varioliform parapsoriasis. Etiology and pathogenesis of acute varioliform parapsoriasis. Clinic of the disease of acute varioliform parapsoriasis. Manifestations of acute varioliform parapsoriasis on the oral mucosa Treatment of acute varioliform parapsoriasis. Etiology and pathogenesis of Wegener's granulomatosis. Clinic of Wegener's granulomatosis. Manifestations on the oral mucosa. Treatment of Wegener's granulomatosis.² • Kaposi's angioreticulosis. Etiology and pathogenesis of Kaposi's angioreticulosis. Clinic of Kaposi's angioreticulosis. Manifestations on the oral mucosa. Kaposi's sarcoma as a manifestation of AIDS. Treatment.² • Pigmentary papillary dystrophy. Etiology and pathogenesis of pigment-papillary dystrophy. Clinic of pigment-papillary dystrophy. Manifestations on the oral mucosa. Treatment.² • Psoriasis. Etiology and pathogenesis of psoriasis. Clinic of psoriasis. Manifestations on the oral mucosa. Treatment.² • Scleroderma. Etiology and pathogenesis of scleroderma. Clinic of scleroderma. Manifestations on the oral mucosa. Treatment of scleroderma. Raynaud's disease. Etiology and pathogenesis of Raynaud's disease. Raynaud's disease clinic. Manifestations on the oral mucosa. Treatment of Raynaud's disease.² • Vasculitis. Schonlein-Henoch disease. Etiology, pathogenesis, clinic, manifestations on the oral mucosa. Nodular periarteritis. Etiology, pathogenesis, clinic, manifestations on the oral mucosa.² • Genetically determined changes in the oral mucosa and lips, clinic, diagnosis, treatment (Peutz-Jeghers-Touraine syndrome, Cowden's disease, or polymorphic hamartoma syndrome, Down's disease). Manifestations of the Peutz-Jeghers-Touraine syndrome on the OM, treatment. Manifestations of Cowden's disease, or polymorphic hamartoma syndrome on oral mucosa, treatment. Manifestations of Down's disease on the oral mucosa, treatment.² • Genetically determined changes in the oral mucosa and lips, clinic, diagnosis, treatment (ichthyosis, Darier's follicular dyskeratosis). Manifestations of ichthyosis on the oral mucosa, treatment. Darier's follicular dyskeratosis manifestations on the oral mucosa, treatment.² • Epithelial dysplasia of the oral mucosa, clinic, diagnosis (Fordyce's disease, Cannon's white spongy nevus. Manifestations on the oral mucosa Fordyce's disease, treatment. Manifestations of the white spongy nevus of Cannon on the oral mucosa, treatment.² 	

	<ul style="list-style-type: none"> • Nevuses and epithelial dysplasia of the oral mucosa, clinic, diagnostics. Nevi (Maffucci syndrome, Stage-Weber syndrome, melanocytic nevi, Albright syndrome, epithelial warty nevus). Neurofibromatosis, or Recklinghausen's disease.² 	
	<ul style="list-style-type: none"> • Epithelial dysplasia of the oral mucosa, clinic, diagnostics (hereditary benign intraepithelial dyskeratosis, congenital fistula of the lower lip). Hereditary benign intraepithelial dyskeratosis. Congenital fistula of the lower lip.² 	
	<ul style="list-style-type: none"> • Genetically determined changes in the oral mucosa and lips, clinic, diagnosis, treatment (congenital panonychia, or Yadasson-Lewandowski syndrome, anhydrotic ectodermal dysplasia, congenital epidermolysis bullosa). Manifestations of congenital panonychia or Yadasson-Lewandowski syndrome on oral mucosa, treatment. Manifestations of anhydrotic ectodermal dysplasia on oral mucosa, treatment. Manifestations of congenital epidermolysis bullosa on oral mucosa, treatment.² 	
	Total	54

¹ - Subject

² - essential content (if necessary)

Considered at the meeting of the department of June 1, 2023, protocol No12

Head of the Department for Therapeutic
Dentistry, DSci, professor



I.V. Firsova