



Ministry of science and high education RF Ulyanovsk State University Faculty of Medicine named after Biktimirov T.Z., IMEiPC F-Educational plan of the discipline	Form	
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APPROVED

by the decision of the Scientific Council of the Institute
Medicine, Ecology and Physical Culture UISU from
"17" 05 2023 y., at the protocol №9/250




Chairman V.I. Midlenko
(signature, decryption of signature)

"17" 05 2023 y.

EDUCATIONAL PLAN

Discipline	Ophthalmology
Faculty	Medical faculty of T.Z. Biktimirov
Name of department	Faculty surgery
Course	5

Speciality 31.05.01. «General medicine»

(code of the speciality, full name)

(with the development of part of the program in English)

Form of education- full-time education

Date of introducing in the instruction process at USU: «01» of September 2023 r.


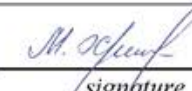
The program was updated at the meeting of the department: Protocol № 9 от 30.05. 20 24 y.


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The program was updated at the meeting of the department: Protocol № ___ от ___ 20 ___ y.

Information about the authors:

Initials	Abbreviation of the department	Degree, scientific rank
Vozzhennikov Anatoly Yurievich	Faculty surgery	Professor, MD, associate Professor

Agreed	Agreed
Head of the faculty surgery department, developing discipline	Head of the graduating department of hospital therapy
 / A.Y. Vozzhennikov / <i>signature</i> Full name	 / M. A. Vise-Khripunova / <i>signature</i> Full name
«28» 04 2023 y.	«29» 04 2023 y.

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1. GOALS AND OBJECTIVES OF THE DISCIPLINE:

The purpose of the development of the discipline "Ophthalmology" - to Train students to identify eye pathology, correctly assess its severity, provide first aid and provide the necessary measures for the organization of prevention, treatment and rehabilitation of patients with various diseases and injuries of the visual organ.

Problems of studying the discipline " Ophthalmology»:

- * Deepen students ' knowledge of clinical anatomy and physiology of the visual organ.
- * To teach functional methods of research of the visual analyzer in children and adults, to show the value of the results of this examination of the patient in identifying the pathology of the Central nervous system.
- * Familiarize students with the etiology, pathogenesis, clinic, diagnosis, prevention and treatment of diseases of the eye and its appendages in common diseases in children and adults with social significance, requiring emergency care.
- * Teach tactical measures for emergency conditions in ophthalmology.
- * Familiarize with the most common operations on the organ of vision and appendage of the eye.
- * To acquaint with questions of medical and labor examination and professional selection.
- * Familiarize yourself with the issues of dispensary care and preventive measures aimed at reducing low vision and blindness.

2. PLACE OF DISCIPLINE IN THE STRUCTURE OF MPEP:

Discipline "Ophthalmology" refers to the basic part of the MPEP IN the specialty 31.05.01 "Medicine" and is studied in the ninth semester.

The teaching of the discipline is based on the knowledge obtained from previous theoretical disciplines.

The development of the discipline is based on knowledge, skills and skills formed by previous disciplines and practices: "human Anatomy", "Microbiology, Virology", "Medical psychology", "Propedeutics of internal diseases", "General surgery", "Immunology", "Pharmacology", "Propedeutics of internal diseases", "Topographic anatomy and operative surgery", "Otorhinolaryngology", "Dentistry", "Neurology".


The study of the discipline "Ophthalmology" allows students to get the necessary knowledge, skills and abilities in the development of the following disciplines: "hospital therapy", "hospital surgery", "Infectious diseases".

The educational discipline "Ophthalmology" provides the necessary knowledge, skills and competencies for subsequent disciplines included in the professional cycle of training specialists.

3. A LIST OF INTENDED LEARNING OUTCOMES ON DISCIPLINE (MODULE), CORRELATED WITH THE PLANNED RESULTS OF EDUCATIONAL PROGRAMS

Formation of General professional competences of the GPC-4 and professional competences of the PC-2, PC-3 according to the plan of development of the educational program.

Code and name of the implemented competences	List of planned learning outcomes for the discipline (module), correlated with the indicators of achievement of competencies
GPC-4 Readiness to use medical devices provided by the procedures for	Know - the Main tools used in the examination of the visual organs and performing operations on the appendage of the eye. List medical instruments used in emergency care for children and adolescents.

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providing medical care	Be able - to conduct an examination of the visual organ using special tools. Interpret the results of the examination, make a clinical diagnosis for the child and adolescent, outline the scope of additional studies to clarify the diagnosis; formulate a preliminary diagnosis. To have skills -Estimates of the health status of the population of different age and gender groups. Interpretation of the results of instrumental methods of examination in ophthalmology in children, adolescents and adults.
PC-2 Willingness to collect and analyze patient complaints, anamnesis, examination, laboratory, instrumental, pathologic, anatomic, and other examinations in order to recognize the condition or establish the presence or absence of disease	Know -pathological conditions, symptoms, and syndromes of diseases localized in the organ of vision and its appendage in accordance with the International statistical classification of diseases and health-related problems. Be able - determine patients ' pathological conditions, symptoms and syndromes of diseases of the visual organ based on the results of modern diagnostic methods used in ophthalmological practice. To have skills - of making a preliminary and clinical diagnosis based on the results of diagnostic studies of pathological conditions of the visual organ and its accessory apparatus.
PC-3 Readiness to manage and treat patients with various nosological forms in outpatient and day hospital conditions	Know - basic principles of management and treatment of diseases of the visual organ in outpatient and day hospital settings. Be able - determine the tactics of management and treatment of patients with diseases of the visual organ in outpatient and day hospital settings. To have skills - determine the tactics of management and treatment of patients with diseases of the visual organ in outpatient and day hospital settings.

4. THE AMOUNT OF DISCIPLINE

4.1. *The amount of discipline in credits (total) **3 ZET***

4.2. *by type of educational work (in hours): 108*

Type of educational work	Number of hours (full-time training)		
	All according to plan	Including semesters	
		9	10
1	2	3	
Contact work of students with the teacher			
Classroom lessons:	72	72/72*	
Lectures	18	18/18*	
Practical exercise	54	54/54*	
Laboratory work, workshops	Not provided by the curriculum		
Self-study	36	36/36*	

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Form of current knowledge control and control independent work (testing, survey, situational tasks)	testing, survey, situational tasks	testing, survey, situational tasks	
Coursework	Not provided by the curriculum		
Types of intermediate certification (exam, test)	credit	credit	
Total hours in the discipline	108	108/108*	

*If it is necessary to use partly distance educational technologies in the educational process, the organization of work with students with disabilities and disabled people is provided in the electronic information and educational environment, taking into account their individual psychophysical characteristics.

4.3. Content of the discipline (module.) Distribution of hours by topics and types of educational work:

Form of training **full-time**

Title of sections and topics	Total	Types of training sessions				Form of current knowledge control
		Classroom lessons		Classes in interactive form	Self-study	
		Lectures	Practical exercises			
1	2	3	4	5	6	
Section 1. General ophthalmology						
1. Ophthalmology and its place among other medical disciplines. Anatomy and physiology of the eye.	7	1	4	-	2	testing, survey
2. Visual function. Refraction and accommodation.	11	1	6	-	4	testing, survey, situational tasks
Section 2. Private ophthalmology						
3. Binocular vision. Strabismus.	10	2	5	-	3	testing, survey, situational tasks
4. Diseases of the conjunctiva, eyelids and lacrimal organs	12	2	6	-	4	testing, survey, situational tasks
5. Pathology of the cornea and sclera.	11	2	6	1	3	testing, survey, situational tasks
6. Pathology of intraocular	13	2	6	1	5	testing, survey,

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pressure.						situational tasks
7. Diseases of the lens and vitreous body.	11	2	6	1	3	testing, survey, situational tasks
8. Pathology of the vascular membrane of the eye.	11	2	5	1	4	testing, survey, situational tasks
9. Pathology of the retina and optic nerve. Changes in the organ of vision in General diseases.	12	2	5	1	5	testing, survey, situational tasks
10. Damage to the visual organ and emergency conditions in ophthalmology	10	2	5	1	3	testing, survey, situational tasks
Total	108	18	54	6	36	

5. COURSE CONTENT

SECTION 1. GENERAL OPHTHALMOLOGY

Topic 1. OPHTHALMOLOGY AND ITS PLACE AMONG OTHER MEDICAL DISCIPLINES. ANATOMY AND PHYSIOLOGY OF THE EYE

The content of the topic:

The concept of the subject "Ophthalmology", its latest achievements in the diagnosis and treatment of diseases of the eye and its appendages in children and adults. The main documents regulating the work in the field of vision protection. Tasks of pediatricians in the protection of children's vision. Anatomical and physiological features of the organ of vision in the clinical aspect. The essence of the visual act. Anomaly of development. The role of light in newborns and children.

Topic 2. VISUAL FUNCTION. REFRACTION AND ACCOMMODATION

The content of the topic:


Central, peripheral, color, binocular vision, color perception. The sequence and timing of their development. Types and frequency of pathology. The principles of constructing tables for determining the visual acuity of color perception and adaptometry. Methods for studying visual acuity in newborns, young children, schoolchildren and adults. Methods of research of fields of vision. Methods of color vision research. Blindness and low vision.

SECTION 2. PRIVATE OPHTHALMOLOGY

Topic 3. BINOCULAR VISION. STRABISMUS

The content of the topic:

The concept of binocular vision and its characteristics. Binocular vision disorders. Friendly

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and paralytic strabismus. Clinic, terms and causes of occurrence. Modern views on the origin of. Causes that contribute to the occurrence of strabismus. Treatment methods, outcomes, prevention.

Theme 4. DISEASES OF THE CONJUNCTIVA, EYELIDS AND LACRIMAL ORGANS

The content of the topic:

Diagnosis and treatment of the most common conjunctival diseases in children and adults. Methods of examination of patients with conjunctival diseases. Prevention and features of professional selection. Anomaly of the shape and position of the eyelids. Allergic diseases of the eyelids. Pathology of the tear-producing apparatus. Pathology of the lacrimal apparatus in children and adults. Inflammatory diseases of the orbit. Diseases of the orbit due to circulatory disorders. Changes in the orbit of endocrine diseases and blood diseases.

Topic 5. PATHOLOGY OF THE CORNEA AND SCLERA

The content of the topic:

Developmental abnormalities of the cornea. Dystrophy of the cornea in children and adults. Clinic, diagnostics, principles of conservative and operative treatment. Inflammatory pathology of the cornea. Clinic, diagnostics, principles of treatment, prevention. The role of corneal microtraumas in the occurrence of its inflammatory diseases. First aid for keratitis.

Topic 6. PATHOLOGY OF INTRAOCULAR PRESSURE

The content of the topic:

Congenital glaucoma. Clinic, diagnostics, treatment methods. Primary glaucoma. Clinic, diagnostics, differential diagnostics, conservative methods and indications for surgical treatment. Modern methods of surgical and laser treatment. Emergency care for an acute attack of glaucoma. Principles of active prevention of blindness in glaucoma. Secondary glaucoma and ophthalmic hypertension.

Theme 7. DISEASES OF THE LENS AND VITREOUS BODY


The content of the topic:

Anomalies of development and congenital pathology of the lens. Clinic, diagnostics and methods of modern treatment of congenital cataracts. Acquired pathology of the lens. Clinic, diagnostics and high-tech surgical methods of treatment of sequential and traumatic cataracts. Methods of correction of aphakia.

Theme 8. PATHOLOGY OF THE VASCULAR MEMBRANE OF THE EYES

The content of the topic:

Anomalies in the development of the iris, ciliary body and choroid, methods of their possible correction. Classification, clinic, methods of diagnosis and treatment of diseases of the iris, ciliary body and proper vascular membrane in children and adults. Research methods necessary to identify the etiology of diseases of the vascular tract. Differential diagnosis of acute iridocyclitis and acute glaucoma attack. General diseases of the body, which may be the most common cause of uveitis.

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Theme 9. PATHOLOGY OF THE RETINA AND OPTIC NERVE. CHANGES IN THE ORGAN OF VISION IN GENERAL DISEASES

The content of the topic:

Lesions of the retina and optic nerve in rheumatism, collagenosis, tuberculosis, toxoplasmosis, blood diseases, kidney, endocrine diseases in children and adults. Changes in the fundus in hypertension, atherosclerosis, diabetes and their complications, with toxicosis of pregnant women. Clinic, diagnostics and possible methods of treatment. Use of the obtained information about changes in the retina and optic nerve to clarify the diagnosis and assess the overall condition.

Lesions of the visual organ in rheumatism, collagenosis, tuberculosis, toxoplasmosis, blood diseases, kidney diseases, endocrine diseases in children and adults. Eye changes in hypertension, atherosclerosis, diabetes and their complications, toxicosis of pregnant women. Clinic, diagnostics and possible methods of treatment. Use of the obtained information about changes in the visual organ in General diseases to clarify the diagnosis and assessment of the General condition.

Theme 10. DAMAGE TO THE VISUAL ORGAN AND EMERGENCY CONDITIONS IN OPHTHALMOLOGY

The content of the topic:

Classification of damage to the eyeball and appendages of the eye. Diagnosis of various forms of damage to the visual organ by anamnesis and typical objective signs. Emergency care for patients with penetrating wounds of the eyeball. Emergency care for patients with eye burns. Emergency care for patients with superficial foreign bodies. Principles of specialized treatment of eye injuries and its appendages in children and adults.

First aid in acute glaucoma and acute iridocyclitis. Acute circulatory disorders of the arteries and veins of the visual organ in rheumatism, collagenosis, tuberculosis, toxoplasmosis, blood diseases, kidney, endocrine diseases in children and adults. Modern laser and surgical methods of treatment. Hemorrhagic changes of the eye in hypertension, atherosclerosis, diabetes and their complications. Clinic, diagnostics and possible methods of treatment. Organization of ophthalmological care for acute and urgent conditions, as prevention of low vision and blindness.

6. THEME OF PRACTICAL TRAINING

SECTION 1. GENERAL OPHTHALMOLOGY

Theme 1. OPHTHALMOLOGY AND ITS PLACE AMONG OTHER MEDICAL DISCIPLINES. ANATOMY AND PHYSIOLOGY OF THE EYE


(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

- 1.To study the basic structures and functions of the eye and its appendage.
- 2.Have an idea of the value of the visual analyzer for the development of the child.
- 3.Assimilate blood circulation and innervation of the eyeball and appendages in children of different ages.
- 4.Get acquainted with the morphological features of the functions of the visual apparatus.

Questions to the topic for discussion:

1. Three links of the visual analyzer (peripheral receptor, pathways, visual centers)
2. The structure of the eyelids.
3. Lacrimal organs and their age features.

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4. Structure of the conjunctiva.
5. Oculomotor apparatus of the eye.
6. The eyeball as a whole.
7. Structure of the outer shell of the eye.
8. Vascular tract (iris, ciliary body, choroid).
9. Lens.
10. Features of the structure of the vitreous body.
11. Anterior and posterior chamber of the eye.
12. Structure and function of the retina.
13. Visual pathway.
14. Vessels and nerves of the eye and appendage.
15. Structure of the orbit.

Theme 2. VISUAL FUNCTION. REFRACTION AND ACCOMMODATION

(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

Give an idea of refraction and its types, astigmatism, accommodation and its disorders.

Teach students to determine the types of clinical refraction subjective and objective method-skiascopy,

To study the clinic of various types of refraction, the principles of correction, refractive errors, issues of prevention of myopia

Acquire skills to use a set of optical glasses,

To check the accommodation and its disorders,

To teach students to prescribe glasses to presbyopes, hypermetropes and to acquaint with questions of medical-labor and military examination.

Questions to the topic for discussion:

1. Basic views.
2. Methods of research of visual acuity in adults and children.
3. Methods for determining color perception disorder.
4. Dark adaptation.
5. The types of research and fields of view.

SECTION 2. PRIVATE OPHTHALMOLOGY.

Theme 3. BINOCULAR VISION. STRABISMUS


(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

1. Teach students to diagnose friendly and paralytic strabismus.
2. Introduce the principles of orthopedic and surgical treatment of strabismus.
3. To acquaint with methods of prevention of friendly strabismus and amblyopia.

Questions to the topic for discussion:

1. Concomitant strabismus.
2. Paralytic strabismus.
3. Diagnosis of paralytic and friendly strabismus. Principles

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- orthopedic and surgical treatment of strabismus.
4. Methods for detecting binocular vision disorders in children.
 5. Prevention of friendly strabismus and amblyopia.

Theme 4. DISEASES OF THE CONJUNCTIVA, EYELIDS AND LACRIMAL ORGANS

(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

Teach students the basics of diagnosis and methods of first aid in conjunctival pathology, diseases of the eyelids and lacrimal organs.

Questions to the topic for discussion:

1. Inflammatory diseases of the eyelids
2. Allergic diseases of the eyelids
3. Anatomy of the shape and position of the eyelids
4. Pathology of the tear-producing apparatus
5. Pathology of the lacrimal apparatus
6. Methods of diagnosis, principles of treatment and prevention of pathology conjunctivas,

Theme 5. PATHOLOGY OF THE CORNEA AND SCLERA

(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

Teach students the diagnosis, clinic and principles of treatment of developmental abnormalities, inflammatory, dystrophic pathology of the cornea, teach first aid for keratitis.

Questions to the topic for discussion:


1. General signs of keratitis.
2. Clinic and treatment of corneal ulcers, tuberculosis and herpetic keratitis.
3. Classification of keratitis.
4. General principles of treatment of keratitis and their outcomes.
5. Keratoplasty.

Theme 6. PATHOLOGY OF INTRAOCULAR PRESSURE

(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

- Teach students the diagnosis, principles of treatment, first aid in an acute attack of glaucoma.
- Teach students the diagnosis, clinic, principles of treatment, first aid for congenital glaucoma in children.

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- To master the basics of diagnostics, clinics, principles of treatment, prevention, medical examination of patients with primary glaucoma.

Questions to the topic for discussion:

1. Definition of glaucoma.
2. The social significance of glaucoma as one of the main causes of blindness.
3. Frequency and prevalence of the disease.
4. Types of glaucoma in adults and children.
5. The fundamental difference between glaucoma in adults and children.

Theme 7. DISEASES OF THE LENS AND VITREOUS BODY

(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

Teach students to diagnose, determine the severity and principles of treatment of cataracts in children and adults, familiarization with the principles of medical care for this pathology. To acquaint with the principles of correction of aphakia, the statement of prescriptions for glasses.

Questions to the topic for discussion:

1. Anatomy of the development of the lens.
2. Congenital cataract.
3. Secondary cataract.
4. Consecutive cataracts.
5. Age-related cataracts.
6. Principles of treatment of cataracts in children and adults.

Theme: 8. PATHOLOGY OF THE VASCULAR MEMBRANE OF THE EYES

(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

Teach students to diagnose, determine the severity and principle of treatment of diseases of the vascular membrane in children and adults, familiarization with the provision of first aid in this pathology. Introduce the principles of disease prevention.

Questions to the topic for discussion:


1. Methods of investigation of the state of the vascular membrane of the eye.
2. The main symptoms of anterior, posterior and peripheral uveitis.
3. Classification of pathology of the vascular membrane of the eye.
4. Clinic of vascular diseases.
5. Modern methods of treatment of diseases of the vascular membrane of the eye.

THEME 9. PATHOLOGY OF THE RETINA AND OPTIC NERVE. CHANGES IN THE ORGAN OF VISION IN GENERAL DISEASES

(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

To acquaint students with the main pathological changes of the eyes in hypertension, pregnancy pathology, diabetes, kidney and blood diseases, acute obstruction of the Central retinal artery, thrombosis of the Central retinal vein, retrolental fibroplasia, retinal dystrophy, external

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exudative retinitis, collagenosis, metabolic disorders. To give an idea about ophthalmological care for children and about medical examination.

Questions to the topic for discussion:

1. Classification of diseases of the retina and optic nerve.
2. Methods of research of retinal and optic nerve diseases
3. Changes in the fundus in hypertension
4. Changes in the fundus of diabetes
5. Changes in the fundus during pregnancy toxicosis
6. Lesions of the retina and optic nerve in rheumatism, collagenosis
7. Lesions of the retina and optic nerve in tuberculosis
8. Lesions of the retina and optic nerve in blood diseases
9. Lesions of the retina and optic nerve in endocrine diseases in children and adults
10. First medical and specialized care for diseases of the retina and optic nerve.

THEME 10. DAMAGE TO THE VISUAL ORGAN AND EMERGENCY CONDITIONS IN OPHTHALMOLOGY


(Form of conduct-practical training)

PURPOSE AND OBJECTIVES OF THE LESSON:

To teach students to diagnose various forms of damage to the visual organ by anamnesis and objective signs, to provide first aid to patients with penetrating wounds of the eyeball, burns and superficial foreign bodies, to familiarize them with the principles of specialized care for various types of eye injuries and their complications.

Questions to the topic for discussion:

1. Classification of damage to the eyeball and appendages of the eye
2. Diagnostics of various forms of damage to the visual organ
3. Emergency care for patients with eye burns
4. Emergency care for patients with superficial foreign bodies
5. Emergency care for patients with penetrating wounds of the eyeball.
6. Principles of specialized treatment of eye injuries and its appendages in children and adults.
7. The role of the therapist and pediatrician in the prevention of eye injuries.
8. First aid for acute glaucoma and acute iridocyclitis.
9. Acute circulatory disorders of the arteries and veins of the visual organ in rheumatism, collagenosis and first aid.
10. Acute circulatory disorders of the arteries and veins of the visual organ in toxoplasmosis and first aid.
11. Acute circulatory disorders of the arteries and veins of the organ of vision in blood diseases and first aid.
12. Acute circulatory disorders of the arteries and veins of the organ of vision in kidney diseases and first aid.
13. Acute circulatory disorders of the arteries and veins of the visual organ in tuberculosis and first aid.
14. Acute circulatory disorders of the arteries and veins of the visual organ in endocrine diseases in children and adults and first aid.
15. Organization of ophthalmological care for acute and urgent conditions, as prevention of low vision and blindness.

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7. LABORATORY WORK (LABORATORY WORKSHOP)


This type of work is not provided by the curriculum.

8. SUBJECTS OF COURSE, CONTROL WORKS, ABSTRACTS

This type of work is not provided by the curriculum.

9. LIST OF QUESTIONS FOR THE TEST


1. Three links of the visual analyzer (peripheral receptor, pathways, visual centers)
2. The structure of the eyelids.
3. Lacrimal organs and their age features.
4. Structure of the conjunctiva.
5. Oculomotor apparatus of the eye.
6. The eyeball as a whole.
7. Structure of the outer shell of the eye.
8. Vascular tract (iris, ciliary body, choroid).
9. Lens.
10. Features of the structure of the vitreous body.
11. Anterior and posterior chamber of the eye.
12. Structure and function of the retina.
13. Visual pathway.
14. Vessels and nerves of the eye and appendage.
15. The structure of the orbit.
16. Basic views.
17. Methods of research of visual acuity in adults and children.
18. Methods for determining color perception disorder.
19. Dark adaptation.
20. The types of research and fields of view.
21. The optical system of the eye, its components.
22. Characteristics of clinical refraction: emmetropia, myopia, hypermetropia.
23. Astigmatism.
24. Methods of refraction research (subjective and objective methods).
25. Accommodation.
26. Concomitant strabismus.
27. Paralytic strabismus.
28. Diagnosis of paralytic and friendly strabismus. Principles of orthoptic and surgical treatment of strabismus.
29. Methods for detecting binocular vision disorders in children.
30. Prevention of friendly strabismus and amblyopia.
31. Inflammatory diseases of the eyelids
32. Allergic diseases of the eyelids
33. Anatomy of the shape and position of the eyelids
34. Pathology of the tear-producing apparatus
35. Pathology of the lacrimal apparatus
36. Methods of diagnosis, principles of treatment and prevention of conjunctival pathology
37. General signs of keratitis.
38. Clinic and treatment of corneal ulcers, tuberculosis and herpetic keratitis.
39. Classification of keratitis.
40. General principles of treatment of keratitis and their outcomes.

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41. Keratoplasty.
42. Definition of glaucoma.
43. Frequency and prevalence of glaucoma.
44. Types of glaucoma in adults and children
45. Anatomy of the development of the lens.
46. Congenital cataract.
47. Secondary cataract.
48. Age-related cataracts.
49. Principles of treatment of cataracts in children and adults.
50. Methods of investigation of the state of the vascular membrane of the eye.
51. The main symptoms of anterior, posterior and peripheral uveitis.
52. Classification of pathology of the vascular membrane of the eye.
53. Clinic of vascular diseases.
54. Modern methods of treatment of diseases of the vascular membrane of the eye.
55. Classification of diseases of the retina and optic nerve.
56. Methods of research of retinal and optic nerve diseases
57. Changes in the fundus in hypertension
58. Changes in the fundus of diabetes
59. Changes in the fundus during pregnancy toxicosis
60. Lesions of the retina and optic nerve in rheumatism, collagenosis
61. Lesions of the retina and optic nerve in tuberculosis
62. Lesions of the retina and optic nerve in blood diseases
63. First medical and specialized care for diseases of the retina and optic nerve
64. Classification of damage to the eyeball and appendages of the eye
65. Diagnostics of various forms of damage to the visual organ
66. Emergency care for patients with eye burns
67. Emergency care for patients with superficial foreign bodies
68. Emergency care for patients with penetrating wounds of the eyeball.
69. Principles of specialized treatment of eye injuries and its appendages in children and adults.

10. INDEPENDENT WORK OF STUDENTS

Title of sections and topics	Type of independent work	Volume in hours	Form of control
Section 1. General ophthalmology			
1. Ophthalmology and its place among other medical disciplines. Anatomy and physiology of the eye.	Study of educational material	2	Sample survey in the classroom. Tests. Questions on the test.
2. Visual function. Refraction and accommodation.	Study of educational material, problem solving.	4	Sample survey in the classroom. Tests. Situational tasks. Questions on the test.
Section 2. Private ophthalmology			
3. Binocular vision. Strabismus.	Study of educational material, problem solving.	3	Sample survey in the classroom.

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			Tests. Situational tasks. Questions on the test.
4. Diseases of the conjunctiva, eyelids and lacrimal organs	Study of educational material, problem solving.	4	Sample survey in the classroom. Tests. Situational tasks. Questions on the test.
5. Pathology of the cornea and sclera.	Study of educational material, problem solving.	3	Sample survey in the classroom. Tests. Situational tasks. Questions on the test.
6. Pathology of intraocular pressure.	Study of educational material, problem solving.	5	Sample survey in the classroom. Tests. Situational tasks. Questions on the test.
7. Diseases of the lens and vitreous body.	Study of educational material, problem solving.	3	Sample survey in the classroom. Tests. Situational tasks. Questions on the test.
8. Pathology of the vascular membrane of the eye.	Study of educational material, problem solving.	4	Sample survey in the classroom. Tests. Situational tasks. Questions on the test.
9. Pathology of the retina and optic nerve. Changes in the organ of vision in General diseases.	Study of educational material, problem solving.	5	Sample survey in the classroom. Tests. Situational tasks. Questions on the test.
10. Damage to the visual organ and emergency conditions in ophthalmology	Study of educational material, problem solving.	3	Sample survey in the classroom. Tests. Situational tasks. Questions on the test.
Total		36	

11. EDUCATIONAL-METHODICAL AND INFORMATION SUPPORT OF THE DISCIPLINE

A) List of recommended literature:

a) Core reading:

1. Егоров Е.А., Офтальмология : учебник / Алексеев В.Н., Астахов Ю.С., Басинский С.Н. и др. ; Под ред. Е.А. Егорова - М. : ГЭОТАР-Медиа, 2016. - 240 с. - ISBN 978-5-9704-3677-

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- 6 - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <http://www.studentlibrary.ru/book/ISBN9785970436776.html>
2. Сидоренко Е.И., Офтальмология : учебник / под ред. Е. И. Сидоренко. - 3-е изд., перераб. и доп. - М. : ГЭОТАР-Медиа, 2015. - 640 с. - ISBN 978-5-9704-3392-8 - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <http://www.studentlibrary.ru/book/ISBN9785970433928.html>
3. Егоров Е.А., Офтальмология / под ред. Е.А. Егорова - М.: ГЭОТАР-Медиа, 2017. - 272 с. - ISBN 978-5-9704-4200-5 - Текст : электронный // ЭБС "Консультант студента": [сайт]. - URL : <http://www.studentlibrary.ru/book/ISBN9785970442005.html>

Main literature:

4. Kuldev Singh; William E. Smiddy; Andrew G. Lee. Ophthalmology Review : A Case-Study Approach New York : Thieme. 2018. eBook. <https://search.ebscohost.com/login.aspx?direct=true&db=e600xww&AN=1918599&site=ehost-live&scope=site>

b) Supplementary reading:

1. Сидоренко Е.И., Офтальмология. Руководство к практическим занятиям : учебное пособие / под ред. Е.И. Сидоренко - М. : ГЭОТАР-Медиа, 2019. - 304 с. - ISBN 978-5-9704-5052-9 - Текст: электронный // ЭБС "Консультант студента" : [сайт]. - URL: <http://www.studentlibrary.ru/book/ISBN9785970450529.html>
2. Егоров Е.А., Рациональная фармакотерапия в офтальмологии / Егоров Е.А., Алексеев В.Н., Астахов Ю.С. и др. / Под ред. Е.А. Егорова. 2-е изд., испр. и доп. - М. : Литтерра, 2011. - 1072 с. (Серия "Рациональная фармакотерапия".) - ISBN 978-5-4235-0011-5 - Текст: электронный // ЭБС "Консультант студента": [сайт]. - URL: <http://www.studentlibrary.ru/book/ISBN9785970409633.html>
3. Никифоров А.С., Офтальмоневрология / А. С. Никифоров, М. Р. Гусева - М. : ГЭОТАР-Медиа, 2014. - 656 с. - ISBN 978-5-9704-2817-7 - Текст : электронный // ЭБС "Консультант студента" [сайт]. - URL: <http://www.studentlibrary.ru/book/ISBN9785970428177.html>
4. Гундорова Р.А., Травмы глаза / под общ. ред. Р. А. Гундоровой, В. В. Нероева, В. В. Кашникова - М. : ГЭОТАР-Медиа, 2014. - 560 с. (Серия "Библиотека врача-специалиста") - ISBN 978-5-9704-2809-2 - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <http://www.studentlibrary.ru/book/ISBN9785970428092.html>
5. Кацнельсон Л.А., Клинический атлас патологии глазного дна / Кацнельсон Л.А., Лысенко В.С., Балишанская Т.И. - 4-е изд., стер. - М. : ГЭОТАР-Медиа, 2013. - 120 с. - ISBN 978-5-9704-2340-0 - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL: <http://www.studentlibrary.ru/book/ISBN9785970423400.html>

Additional literature:

6. P.A. Netland, A.P. Tanna,. Glaucoma Medical Therapy [Place of publication not identified] : Kugler Publications. 2021. eBook. <https://search.ebscohost.com/login.aspx?direct=true&db=e600xww&AN=2723265&site=ehost-live&scope=site>

c) Educational and methodical literature


1. Vozzhennikov A.Y.
Guidelines for students' independent work on the discipline "Ophthalmology" for specialty

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- 31.05.01 "Medical business" english program / A.Y. Vozzhennikov, T. A. Midlenko; Ulyanovsk State University. - Ulyanovsk : UISU, 2022. - 11 p. - Неопубликованный ресурс; На англ. яз. - URL: <http://lib.ulsu.ru/MegaPro/Download/MObject/11567> . - Режим доступа: ЭБС УлГУ. - Текст : электронный.
2. Возрастная макулярная дегенерация : учебно-методическое пособие для студентов, клинических ординаторов и врачей-офтальмологов медицинских организаций / А. Ю. Возженников, Т. А. Мидленко; УлГУ, ИМЭиФК, Мед. фак. им. Т. З. Биктимирова. - Ульяновск: УлГУ, 2019. - Загл. с экрана. - Электрон. текстовые дан. (1 файл : 2,25 МБ). - Текст: электронный. <http://lib.ulsu.ru/MegaPro/Download/MObject/2773>
 3. Методические указания для практических занятий студентов по дисциплине «Офтальмология» для специальности 31.05.01 "Лечебное дело" и 31.05.02 "Педиатрия" / А. Ю. Возженников, Т. А. Мидленко; УлГУ, Мед. фак. - Ульяновск : УлГУ, 2019. - Загл. с экрана; Неопубликованный ресурс. - Электрон. текстовые дан. (1 файл : 804 КБ). - Текст : электронный. <http://lib.ulsu.ru/MegaPro/Download/MObject/4348>
 4. Методические указания для самостоятельной работы студентов по дисциплине «Офтальмология» для специальности 31.05.01 "Лечебное дело" и 31.05.02 "Педиатрия" / А. Ю. Возженников, Т. А. Мидленко; УлГУ, Мед. фак. - Ульяновск : УлГУ, 2019. - Загл. с экрана; Неопубликованный ресурс. - Электрон. текстовые дан. (1 файл : 547 КБ). - Текст : электронный. <http://lib.ulsu.ru/MegaPro/Download/MObject/4349>

Согласовано:

И. Бибикова отп. Стажировка Стаж

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Профессиональные базы данных, информационно-справочные системы

1. Электронно-библиотечные системы:

1.1. Цифровой образовательный ресурс IPRsmart:электронно-библиотечная система : сайт / ООО Компания«Ай Пи Ар Медиа». - Саратов, [2023]. –URL:<http://www.iprbookshop.ru>. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.2. Образовательная платформа ЮРАЙТ: образовательный ресурс, электронная библиотека : сайт / ООО Электронное издательство«ЮРАЙТ». – Москва, [2023]. - URL: <https://urait.ru>. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.3. База данных «Электронная библиотека технического ВУЗа (ЭБС «Консультант студента»):электронно-библиотечная система : сайт / ООО «Политехресурс». – Москва, [2023]. –URL:<https://www.studentlibrary.ru/cgi-bin/mb4x>. – Режим доступа: для зарегистрир. пользователей. –Текст : электронный.

1.4. Консультант врача. Электронная медицинская библиотека :база данных : сайт / ООО «Высшая школа организации и управления здравоохранением-Комплексный медицинский консалтинг». – Москва, [2023]. – URL: <https://www.rosmedlib.ru>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.5. Большая медицинская библиотека: электронно-библиотечная система: сайт / ООО «Букап». – Томск, [2023]. – URL: <https://www.books-up.ru/ru/library/>. – Режим доступа: для зарегистрир. пользователей. – Текст: электронный.

1.6. ЭБС Лань:электронно-библиотечная система: сайт/ ООО ЭБС «Лань». –Санкт-Петербург, [2023]. –URL:<https://e.lanbook.com>. – Режим доступа: для зарегистрир. пользователей. –Текст : электронный.

1.7. ЭБС Znanium.com:электронно-библиотечная система : сайт / ООО «Знаниум». - Москва, [2023]. - URL: <http://znanium.com> . – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

2. КонсультантПлюс [Электронный ресурс]: справочная правовая система. /ООО «Консультант Плюс» - Электрон. дан. - Москва :КонсультантПлюс, [2023].

3.Базы данных периодических изданий:

3.1. eLIBRARY.RU: научная электронная библиотека : сайт / ООО «Научная Электронная Библиотека». – Москва, [2023]. – URL: <http://elibrary.ru>. – Режим доступа : для авториз. пользователей. – Текст : электронный

3.2. Электронная библиотека «Издательского дома «Гребенников» (Grebinnikon) : электроннаябиблиотека / ООО ИД «Гребенников». – Москва, [2023]. – URL: <https://id2.action-media.ru/Personal/Products>. – Режим доступа : для авториз. пользователей. – Текст : электронный.


4. Федеральная государственная информационная система «Национальная электронная библиотека»:электронная библиотека: сайт / ФГБУ РГБ. – Москва, [2023]. – URL:<https://нэб.рф>. – Режим доступа: для пользователей научной библиотеки. –Текст : электронный.

5. Российское образование: федеральный портал / учредитель ФГАУ «ФИЦТО». – URL: <http://www.edu.ru>. – Текст : электронный.

6. Электронная библиотечная система УлГУ : модуль «Электронная библиотека» АБИС Мега-ПРО / ООО «Дата Экспресс». – URL:<http://lib.ulsu.ru/MegaPro/Web>. – Режим доступа :для пользователей научной библиотеки. – Текст : электронный.

Согласовано:

Ишенин Вадим ; Ишенин Юль ; Ишенин ; 20.04.2023
 Должность сотрудника УИТиГ ФИО Подпись Дата

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12. MATERIAL AND TECHNICAL SUPPORT OF THE DISCIPLINE

Training room (area 14.74 m²) for lectures, seminars, group and individual consultations, current control, intermediate and final state certification.

The room is equipped with a set of student furniture for 15 seats.

Technical means:

1. Canon Digital Camera. Inv. No. 2104001344.
2. ASUS a7rooc Merom Core laptop. Inv. No. 2104001345.
3. Classroom Board.

Educational equipment:

Roth apparatus for checking visual acuity.

Synoptophore.

Maklakov's Tonometer.

Set of tonometer and Filatov-Kalfa.

Revisiontree.

Four-point color test.

Diopter.

Set NKS-1 for vision correction for the visually impaired.

A device for determining the critical frequency of merge of light flashings.

Large reflex-free Ophthalmoscope.

Mirror Ophthalmoscope OZ-5.

Set of tables for all topics of classes.

Tablets with photos on all subjects studied.

Medical facility equipment provided under the contract:

1. Projection apparatus for vision testing.
2. A set of glasses for vision correction.
3. Refractometer.
4. Non-contact tonometer.
5. Slit lamp.
6. Endothelial microscope.
7. Optical coherence tomography.
8. Optical keratophyre.
9. Ultrasonic ceratopogonidae.
10. Ultrasonic A-scanner.
11. Ultrasonic V-scan.
12. Hi Scan.
13. Ophthalmometer.
14. Keratotopograph.
15. Operating microscope.

13. SPECIAL CONDITIONS FOR STUDENTS WITH DISABILITIES HEALTH OPPORTUNITIES

Training on opop IN students with disabilities is carried out taking into account the peculiarities of psychophysical development, individual capabilities and health status of such students.

Education of students with disabilities can be organized together with other students, or separately. If necessary, students from among persons with disabilities (at the request of the student) may be offered one of the following options for perception of information, taking into account their individual psychophysical characteristics:

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for persons with visual impairments: in printed form in enlarged font; in the form of an electronic document; in the form of an audio file (translation of educational materials into audio format); in printed form in Braille; individual consultations with the involvement of a Typhoon translator; individual tasks and consultations.

for persons with hearing impairment: in printed form; in the form of an electronic document; video materials with subtitles; individual consultations involving a sign language interpreter; individual tasks and consultations.


for persons with disorders of the musculoskeletal system: in printed form; in the form of an electronic document; in the form of an audio file; individual tasks and consultations".

If it is necessary to use partially / exclusively distance educational technologies in the educational process, the organization of teaching staff work with students with disabilities and disabled people is provided in the electronic information and educational environment, taking into account their individual psychophysical characteristics.



Developer




Professor of the Department, Vozzhennikov A.Y.

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**LIST OF CHANGES of
Educational plan of discipline «Ophthalmology»
Speciality 31.05.01. «General medicine»**

№	Content of the change or a link to the attached text of the	Full name of the head of the Department developing the discipline	Signature	Date
1	Introduction of changes to item A) Recommended Literature item 11 "Educational, methodological and information support of the discipline" with the design of Appendix 1	Vozzhennikov A.Y.		30.05.2024
2	Introduction of changes to item C) Professional databases, information and reference systems item 11 "Educational, methodological and information support of the discipline" with the design of Appendix 2	Vozzhennikov A.Y.		30.05.2024

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1.2. Образовательная платформа ЮРАЙТ : образовательный ресурс, электронная библиотека : сайт / ООО Электронное издательство «ЮРАЙТ». – Москва, [2024]. - URL: <https://urait.ru>. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.3. База данных «Электронная библиотека технического ВУЗа (ЭБС «Консультант студента») : электронно-библиотечная система : сайт / ООО «Политехресурс». – Москва, [2024]. – URL: <https://www.studentlibrary.ru/cgi-bin/mb4x>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.4. Консультант врача. Электронная медицинская библиотека : база данных : сайт / ООО «Высшая школа организации и управления здравоохранением-Комплексный медицинский консалтинг». – Москва, [2024]. – URL: <https://www.rosmedlib.ru>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.5. Большая медицинская библиотека : электронно-библиотечная система : сайт / ООО «Букап». – Томск, [2024]. – URL: <https://www.books-up.ru/ru/library/>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.6. ЭБС Лань : электронно-библиотечная система : сайт / ООО ЭБС «Лань». – Санкт-Петербург, [2024]. – URL: <https://e.lanbook.com>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.7. ЭБС Znanium.com : электронно-библиотечная система : сайт / ООО «Знаниум». - Москва, [2024]. - URL: <http://znanium.com>. – Режим доступа : для зарегистрир. пользователей. - Текст : электронный.

2. КонсультантПлюс [Электронный ресурс]: справочная правовая система. / ООО «Консультант Плюс» - Электрон. дан. - Москва : КонсультантПлюс, [2024].

3. eLIBRARY.RU: научная электронная библиотека : сайт / ООО «Научная Электронная Библиотека». – Москва, [2024]. – URL: <http://elibrary.ru>. – Режим доступа : для авториз. пользователей. – Текст : электронный

4. Федеральная государственная информационная система «Национальная электронная библиотека» : электронная библиотека : сайт / ФГБУ РГБ. – Москва, [2024]. – URL: <https://нэб.рф>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

5. Российское образование : федеральный портал / учредитель ФГАУ «ФИЦТО». – URL: <http://www.edu.ru>. – Текст : электронный.

6. Электронная библиотечная система УлГУ : модуль «Электронная библиотека» АБИС Mega-PIPO / ООО «Дата Экспресс». – URL: <http://lib.ulsu.ru/MegaPro/Web>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

Инженер ведущий



Щуренко Ю.В. 2024