

№ЛД-21 ИН

Федеральное государственное бюджетное образовательное учреждение
высшего образования
«СЕВЕРО-ОСЕТИНСКАЯ ГОСУДАРСТВЕННАЯ МЕДИЦИНСКАЯ
АКАДЕМИЯ»
Министерства здравоохранения Российской Федерации

УТВЕРЖДАЮ

Ректор ФГБОУ ВО СОГМА Минздрава России

«17» апреля 2024 г.

**РАБОЧАЯ ПРОГРАММА ДИСЦИПЛИНЫ
ОФТАЛЬМОЛОГИЯ**

основной профессиональной образовательной программы высшего
образования – программы специалитета по специальности 31.05.01 Лечебное
дело, частично реализуемая на иностранном языке, утвержденной
17.04.2024 г.

Форма обучения - очная

Срок освоения - 6

Кафедра оториноларингологии с офтальмологией

Владикавказ 2024

При разработке рабочей программы дисциплины в основу положены:

1. ФГОС ВО по специальности 31.05.01 Лечебное дело, частично реализуемая на иностранном языке, утвержденный Министерством образования и науки Российской Федерации «9» февраля 2016 г. № 95
2. Учебный план ОПОП ВО по специальности 31.05.01 Лечебное дело, частично реализуемая на иностранном языке
ЛД-21-01-21ИН
ЛД-21-02-22ИН
ЛД-21-03-23ИН
ЛД-21-04-24ИН, утвержденный ученым Советом ФГБОУ ВО СОГМА Минздрава России 17.04.2024, протокол № 6

Рабочая программа дисциплины одобрена на заседании кафедры оториноларингологии с офтальмологией от «28» марта 2024 г., протокол №8

Рабочая программа дисциплины одобрена на заседании центрального координационного учебно-методического совета от «2» апреля 2024 г., протокол №4

Рабочая программа дисциплины утверждена ученым советом ФГБОУ ВО СОГМА Минздрава России 17.04.2024, протокол № 6

Разработчики:

Заведующий кафедрой оториноларингологии с офтальмологией Гаппоева Э.Т.
Доцент кафедры оториноларингологии с офтальмологией Короев О.А.

Рецензенты:

Заведующая кафедрой общей гигиены и физической культуры ФГБОУ ВО СОГМА МЗ России, профессор, д.м.н. Кусова А.Р.

Директор ГАУЗ «Республиканский офтальмологический центр» МЗ РСО-А, к.б.н. Дзгоева И.С.

Content of the work program:

1. name of discipline;
2. a list of intended learning outcomes for the discipline associated with the planned results of educational programs;
3. indication of the place of discipline in the structure of the educational program;
4. the amount of discipline in credits indicating the number of academic or astronomical hours allocated for contact work of students with the teacher (by type of training) and for independent work of students;
5. the content of the discipline, structured by topics (sections) with an indication of the number of academic or astronomical hours allotted to them and types of training sessions;
6. the list of educational and methodological support for independent work of students in the discipline;
7. fund evaluation funds for intermediate certification of students in the discipline;
8. the list of basic and additional educational literature necessary for the development of the discipline;
9. list of resources of information and telecommunication network "Internet" (hereinafter-the "Internet"), necessary for the development of the discipline;
10. guidelines for students on the development of the discipline;
11. the list of information technologies used in the implementation of the educational process in the discipline, including a list of software and information reference systems (if necessary);
12. description of the material and technical base necessary for the implementation of the educational process in the discipline;
13. conducting educational activities using e-learning and distance learning technologies.

2. The list of planned learning outcomes in the discipline and the results of the development of the educational program

№№	Number/ index of competence	Content of the competence (or part of it)	Topic of the lesson (section)	Indicators of competence achievement	Development results		
					know	can	own
1	2	3	4	5	6	7	8
1.	GPC-4.	Able to use medical devices provided for in the procedure for providing medical care, as well as to conduct examinations of the patient in order to establish a diagnosis	Lesson 2. Methods of studying the eye and its appendages. The order of examination of the eye patient and the scheme of the medical history. Performing eye diagnostic and therapeutic manipulations.	IA-3 GPC-4 Has an algorithm for the use of medical devices provided for in the procedure for providing medical care.	Methods of examination of the visual organ (general examination, examination of complaints and anamnesis, external examination of the eye and its appendages).	Perform external examination of the eye and its appendages, examination by lateral illumination and in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmometry, determination of corneal sensitivity, and perform eyelid eversion.	External examination of the eye and surrounding tissues. Remove the eyelids. Determination of the presence of a pathological substance in the lacrimal sac. Examination of the eye by focal examination. Examination the eye in the passing light. Ophthalmoscopy. Biomicroscopy. Diafanoscopy. Determining the width of the angle of the front chamber according to the Wurgaft. Determination of binocular vision by orienting methods. Skiascopy. Determination of the type and strength of optical glass. Exophthalmometry. Fixation of small children for eye examination. The tubule and nasal passages. Examination of

							intraocular pressure. Determination of the integrity of the cornea.
2.	PC-2	Conducting an examination of the patient in order to establish a diagnosis	<p>Lesson 5. Diseases of the orbit, eyelids, conjunctiva and lacrimal organs.</p> <p>Lesson 6. Diseases of the cornea and sclera.</p> <p>Lesson 7. Diseases of the vascular membrane of the</p>	<p>IA-1 PC-2 Collects complaints, anamnesis of the patient's life and illness and analyzes the information received</p> <p>IA-4 PC-2 Justifies the need and scope instrumental examination of the patient</p> <p>IA-6 PC-2 Analyzes the results of the patient's examination, if necessary, develops and plans the volume of additional studies</p> <p>IA-7 PC-2 interprets the results of collecting information about the patient's illness</p> <p>IA-9 PC-2 interprets the data obtained during the instrumental examination of the patient</p>	<p>Principles of comprehensive assessment of clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the orbit, eyelids, conjunctiva and lacrimal organs, methods of their prevention and treatment.</p> <p>Principles of comprehensive assessment of clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the cornea and sclera.</p> <p>Principles of comprehensive</p>	<p>Perform exophthalmometry. Possess a method of inspection of all departments of the conjunctiva. Examine and palpate the tear sac area. Perform a therapeutic massage of the tear sac. Diagnose the most common diseases of the orbit, eyelids, lacrimal organs, and conjunctiva.</p> <p>Conduct an examination of the eye with side-light. Conduct the study in a passing light. Determine the size, curvature, sensitivity, and integrity of the face. Diagnose the main pathology of the cornea and sclera.</p> <p>Conduct an examination of the eye</p>	<p>Making a preliminary diagnosis of diseases of the orbit, eyelids, conjunctiva and lacrimal organs, Making a decision on the following medical tactics.</p> <p>Making a preliminary diagnosis of corneal and scleral diseases. Making a decision about the following medical tactics.</p> <p>Making a preliminary diagnosis of diseases</p>

			eye.		assessment of clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the vascular membrane.	with side-light. Perform a passing light examination, biomicroscopy, reverse and direct ophthalmoscopy. To diagnose the main pathology of the vascular membrane.	of the vascular tract. Making a decision on the subsequent medical tactics.
			Lesson 8. Diseases of the retina and optic nerve. Ocular manifestations of the most common common diseases of people of different ages, radiation damage.		Principles of a comprehensive assessment of clinical picture, data of ophthalmological and laboratory methods of investigation in the diagnosis of diseases of the retina and visual nerve, ocular manifestations of the most common common diseases.	Possess a method of inspection of all departments of the conjunctiva. Conduct a side-light survey. Conduct a study in the passing light, biomicroscopy, reverse and direct ophthalmoscopy.	Making a preliminary diagnosis of diseases of the retina and optic nerve, eye manifestations of the most common common diseases. Making a decision about the following medical tactics.
			Lesson 9. Diseases of the lens and vitreous body.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the lens and vitreous body.	Conduct a side-light examination of the eye. Conduct a study in transmitted light, biomicroscopy. Diagnose cataracts and vitreous pathology.	Making a preliminary diagnosis of diseases of the lens and vitreous body. Making a decision about the following medical tactics.

			Lesson 10. Glaucoma.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of glaucoma.	Conduct a side-light examination of the eye. Perform a transmitted light examination, bio-microscopy, reverse and direct ophthalmoscopy. Examine the ophthalmotonus and visual fields. Diagnose glaucoma.	Making a preliminary diagnosis of glaucoma. Making a decision on the subsequent medical tactics.
			Lesson 11. Neoplasms of the visual organ.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of neoplasms of the visual organ.	Perform external examination of the eye and its appendages, examination by lateral illumination and in transmitted light, bio-microscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmotometry. Diagnose neoplasms of the visual organ.	By making a preliminary diagnosis of neoplasms of the visual organ. Making a decision on the subsequent medical tactics.
			Lesson 12. Damage to the visual organ.		Principles of comprehensive assessment of clinical picture, data of ophthalmological and laboratory research methods in	Perform external examination of the eye and its appendages, examination by lateral illumination and in transmitted light, bio-	By making a preliminary diagnosis of damage to the visual organ. Making a decision on the subsequent medical

			Lesson 13. Occupational eye diseases.		the diagnosis of visual organ damage.	microscopy, reverse and direct ophthalmoscopy, exophthalmometry. Diagnose damage to the visual organ.	tactics.
			Lesson 15. Binocular vision. Strabismus.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of occupational eye diseases.	Perform external examination of the eye and its appendages, examination by side lighting and in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmotometry. Diagnose occupational eye diseases.	Making a preliminary diagnosis of occupational eye diseases. Making a decision on the subsequent medical tactics.
					Principles of a comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of pathology of the oculomotor apparatus.	Determine visual acuity. Determine the nature of vision. Determine the type and strength of clinical refraction by subjective methods. Determine the nature of vision. Determine the angle of strabismus by Hirschberg and on the synaptophore, deter-	Making a preliminary diagnosis of oculomotor system pathology. Making a decision on the subsequent medical tactics.

						mine the heterophoria.	
3.	PC-3	Prescribing treatment and monitoring its effectiveness and safety	<p>Lesson 5. Diseases of the orbit, eyelids, conjunctiva and lacrimal organs.</p> <p>Lesson 6. Diseases of the cornea and sclera.</p> <p>Lesson 7. Diseases of the vascular membrane of the eye.</p>	<p>IA-1 PC-3 Draws up a treatment plan for the disease and the patient's condition, taking into account the diagnosis, the patient's age, the clinical picture of the disease in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care</p> <p>IA-2 PC-3 Prescribes medicines, medical devices and medical nutrition, taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care</p> <p>IA-4 PC-3 Assesses the effectiveness and safety of the use of medicines, medical products and medical nutrition</p>	<p>Principles of comprehensive assessment of clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the orbit, eyelids, conjunctiva and lacrimal organs, methods of their prevention and treatment.</p> <p>Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the cornea and sclera.</p> <p>Principles of comprehensive assessment of the clinical picture, data</p>	<p>Perform exophthalmometry. Master the technique of examining all parts of the conjunctiva. Examine and palpate the area of the tear sac. Perform a therapeutic massage of the tear sac. Diagnose the most common diseases of the orbit, eyelids, lacrimal organs and conjunctiva.</p> <p>Conduct a side-light examination of the eye. Conduct a study in transmitted light. Determine the size, curvature, sensitivity, and integrity of the cornea. To diagnose the main pathology of the cornea and sclera.</p> <p>Conduct a side-light examination of the eye. Perform a transmitted light</p>	<p>Making a preliminary diagnosis of diseases of the orbit, eyelids, conjunctiva and lacrimal organs, Making a decision on the following medical tactics.</p> <p>Making a preliminary diagnosis of corneal and scleral diseases. Making a decision about the following medical tactics.</p> <p>Making a preliminary diagnosis of diseases of the vascular tract. Making a decision on</p>

					of ophthalmological and laboratory research methods in the diagnosis of diseases of the vascular membrane.	examination, biomicroscopy, reverse and direct ophthalmoscopy. To diagnose the main pathology of the vascular membrane.	the subsequent medical tactics.
			Lesson 8. Diseases of the retina and optic nerve. Ocular manifestations of the most common common diseases of people of different ages, radiation damage.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the retina and optic nerve, ocular manifestations of the most common diseases.	Master the technique of examining all parts of the conjunctiva. Conduct a side-light examination of the eye. Perform a transmitted light examination, biomicroscopy, reverse and direct ophthalmoscopy.	Making a preliminary diagnosis of diseases of the retina and optic nerve, ocular manifestations of the most common common diseases. Making a decision about the following medical tactics.
			Lesson 9. Diseases of the lens and vitreous body.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the lens and vitreous body.	Conduct a side-light examination of the eye. Conduct a study in transmitted light, biomicroscopy. Diagnose cataracts and vitreous pathology.	Making a preliminary diagnosis of diseases of the lens and vitreous body. Making a decision about the following medical tactics.
			Lesson 10. Glaucoma.		Principles of comprehensive	Conduct a side-light examination	Making a preliminary diagnosis of

					assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of glaucoma.	of the eye. Perform a transmitted light examination, biomicroscopy, reverse and direct ophthalmoscopy. Examine the ophthalmotonus and visual fields. Diagnose glaucoma.	glaucoma. Making a decision on the subsequent medical tactics.
			Lesson 11. Neoplasms of the visual organ.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of neoplasms of the visual organ.	Perform external examination of the eye and its appendages, examination by side lighting and in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmotometry. Diagnose neoplasms of the visual organ.	By making a preliminary diagnosis of neoplasms of the visual organ. Making a decision on the subsequent medical tactics.
			Lesson 12. Damage to the visual organ.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of visual organ damage.	Perform external examination of the eye and its appendages, examination by lateral illumination and in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, ex-	By making a preliminary diagnosis of damage to the visual organ. Making a decision on the subsequent medical tactics.

			<p>Lesson 13. Occupational eye diseases.</p> <p>Lesson 15. Binocular vision. Strabismus.</p>		<p>Principles of comprehensive assessment of clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of occupational eye diseases.</p> <p>Principles of a comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of pathology of the oculomotor apparatus.</p>	<p>ophthalmometry. Diagnose damage to the visual organ.</p> <p>Perform external examination of the eye and its appendages, examination by side lighting and in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmotometry. Diagnose occupational eye diseases.</p> <p>Determine visual acuity. Determine the nature of vision. Determine the type and strength of clinical refraction by subjective methods. Determine the nature of vision. Determine the angle of strabismus by Hirschberg and on the synaptophore, determine the heterophoria.</p>	<p>Making a preliminary diagnosis of occupational eye diseases. Making a decision on the subsequent medical tactics.</p> <p>Making a preliminary diagnosis of oculomotor system pathology. Making a decision on the subsequent medical tactics.</p>
4.	PC-4	Implementation and	Lesson 5. Diseases of the	IA-1 PC-4 Detects signs of	Principles of	Perform exophthal-	Making a preliminary

		<p>monitoring of the effectiveness of medical rehabilitation of the patient, including the implementation of individual rehabilitation programs or habilitation of disabled people, evaluation the patient's ability to carry out work activities</p>	<p>orbit, eyelids, conjunctiva and lacrimal organs.</p> <p>Lesson 6. Diseases of the cornea and sclera.</p> <p>Lesson 7. Diseases of the vascular membrane of the</p>	<p>temporary disability and signs of persistent impairment of body functions due to illness, the consequences of injuries or defects IA-2 PC-4 Defines medical indications for carrying out medical rehabilitation measures, including when implementing an individual rehabilitation program or rehabilitation of disabled people, in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care</p>	<p>comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the orbit, eyelids, conjunctiva and lacrimal organs, methods of their prevention and treatment.</p> <p>Principles of comprehensive assessment of clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the cornea and sclera.</p> <p>Principles of comprehensive</p>	<p>ometry. Master the technique of examining all parts of the conjunctiva. Examine and palpate the area of the tear sac. Perform a therapeutic massage of the tear sac. Diagnose the most common diseases of the orbit, eyelids, lacrimal organs and conjunctiva.</p> <p>Conduct a side-light examination of the eye. Conduct a study in transmitted light. Determine the size, curvature, sensitivity, and integrity of the cornea. To diagnose the main pathology of the cornea and sclera.</p> <p>Conduct a side-light examination</p>	<p>diagnosis of diseases of the orbit, eyelids, conjunctiva and lacrimal organs, making a decision on subsequent medical tactics.</p> <p>Making a preliminary diagnosis of diseases of the cornea and sclera. Making a decision on the subsequent medical tactics.</p> <p>Making a preliminary diagnosis of diseases</p>
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			eye.		assessment of clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the vascular membrane.	of the eye. Perform a transmitted light examination, biomicroscopy, reverse and direct ophthalmoscopy. To diagnose the main pathology of the vascular membrane.	of the vascular tract. Making a decision on the subsequent medical tactics.
			Lesson 8. Diseases of the retina and optic nerve. Ocular manifestations of the most common common diseases of people of different ages, radiation damage.		Principles of a comprehensive assessment of clinical picture, data of ophthalmological and laboratory methods of investigation in the diagnosis of diseases of the retina and optic nerve, ocular manifestations of the most important common diseases.	Master the technique of examining all parts of the conjunctiva. Conduct a side-light examination of the eye. Perform a transmitted light examination, biomicroscopy, reverse and direct ophthalmoscopy.	Making a preliminary diagnosis of diseases of the retina and optic nerve, ocular manifestations of the most common common diseases. Making a decision on the subsequent medical tactics.
			Lesson 9. Diseases of the lens and vitreous body.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of diseases of the lens and vitreous body.	Conduct a side-light examination of the eye. Conduct a study in transmitted light, biomicroscopy. Diagnose cataracts and vitreous pathology.	Making a preliminary diagnosis of diseases of the lens and vitreous body. Making a decision on the subsequent medical tactics.

			Lesson 10. Glaucoma.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of glaucoma.	Conduct a side-light examination of the eye. Perform a transmitted light examination, biomicroscopy, reverse and direct ophthalmoscopy. Examine the ophthalmotonus and visual fields. Diagnose glaucoma.	Making a preliminary diagnosis of glaucoma. Making a decision on the subsequent medical tactics.
			Lesson 11. Neoplasms of the visual organ.		Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of neoplasms of the visual organ.	Perform external examination of the eye and its appendages, examination by side lighting and in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmotometry. Diagnose neoplasms of the visual organ.	By making a preliminary diagnosis of neoplasms of the visual organ. Making a decision on the subsequent medical tactics.
			Lesson 12. Damage to the visual organ.		Principles of comprehensive assessment of clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of	Perform external examination of the eye and its appendages, examination by lateral illumination and in transmitted light, biomicroscopy, rever-	By making a preliminary diagnosis of damage to the visual organ. Making a decision on the subsequent medical tactics.

			Lesson 13. Occupational eye diseases.		visual organ damage.	se and direct ophthalmoscopy, exophthalmometry. Diagnose damage to the visual organ.	
			Занятие 15. Бинокулярное зрение. Косоглазие.		Principles of comprehensive assessment of clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of professional eye diseases.	Perform external examination of the eye and its appendages, examination by side lighting and in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmotometry. Diagnose occupational eye diseases.	Making a preliminary diagnosis of occupational eye diseases. Making a decision on the subsequent medical tactics.
					Principles of a comprehensive assessment of the clinical picture, data of ophthalmological and laboratory research methods in the diagnosis of pathology of the oculomotor apparatus.	Determine visual acuity. Determine the nature of vision. Determine the type and strength of clinical refraction by subjective methods. Determine the nature of vision. Determine the angle of strabismus by Hirschberg and on the synaptophore, determine the	Making a preliminary diagnosis of oculomotor system pathology. Making a decision on the subsequent medical tactics.

3. The place of discipline in the structure of the educational program

The academic discipline of ophthalmology belongs to the basic part of Block 1 of the Federal state educational standard for medical care.

4. The amount of discipline

№	Kind of work	Total credits	Total hours	Number of hours	Semester
1	2	3	4	5	6
1	Contact work of students with teacher (total), including:	2	72	72	8
2	Lectures (L)		20	20	
3	Clinical practical training (PT)		52	52	
4	Seminars (S)				
5	Laboratory work (LW)				
6	Independent work of the student (IWS)	1	36	36	
7	Type of intermediate certifications	credit (3)	credit (3)		
		exam (e)			
8	TOTAL: Total laboriousness			108	108
		Total credits	3		

5. The content of the discipline

№	№ semester's	Name of the topic (section) of the discipline	Types of educational activities (in hours)					Forms of current control of progress
			L	LW	PT	IWS	in total	
1	2	3	4	5	6	7	8	9
1	8	Principles and methods of vision protection in children and adults. The role of the eye (part of the brain) in life. The role of light in the functioning of the optic-vegetative system of the photoenergy system. Connection of eye pathology with General diseases in children and adults. Philo-morphogenesis and anatomy of the organ of vision. Anomaly of development.	2		4	2	8	Test tasks, situational tasks, home independent work, teacher survey, abstracts.

2	8	Methods of investigation of the eye and its appendages. The order of examination of the eye patient and the scheme of the history of the disease. Performing eye diagnostic and therapeutic manipulations.			8	4	12	Test tasks, situational tasks, home independent work, teacher survey, visual control, abstracts.
3	8	Visual functions, starting at birth and in adults. Binocular nature of vision and its disorders.	2		4	3	9	Test tasks, situational tasks, home independent work, teacher survey, visual control, abstracts.
4	8	Optical system of the eye. Actual problems of clinical refraction. Correction of ametropia (spectacle, contact, laser, surgical).	2		4	3	9	Test tasks, situational tasks, home independent work, teacher survey, abstracts.
5	8	Diseases of the orbit, eyelids, conjunctiva and lacrimal organs.	2		4	3	9	Test tasks, situational tasks, home independent work, teacher survey, abstracts.
6	8	Diseases of the cornea sclera and the vascular membrane of the eye.	2		4	4	10	Test tasks, situational tasks, home independent work, teacher survey, abstracts.
7	8	Diseases of the retina and optic nerve. Eye manifestations of the most frequent common diseases of people of different ages, radiation lesions.	2		4	2	8	Test tasks, situational tasks, home independent work, teacher survey, abstracts..
8	8	Diseases of the lens and vitreous.	2		4	3	9	Test tasks, situational tasks, home independent work, teacher survey, abstracts.

9	8	Glaucomas.	2		4	3	9	Test tasks, situational tasks, home independent work, teacher survey, abstracts.
10	8	Neoplasms of the organ of vision	2		3	2	7	Test tasks, situational tasks, home independent work, teacher survey, abstracts.
11	8	Damage to the organ of vision.	2		3	3	8	Test tasks, situational tasks, home independent work, teacher survey, abstracts.
12	8	Professional diseases of the eye.			1	2	3	Test tasks, situational tasks, home independent work, teacher survey, abstracts.
13	8	Examination of military and labor.			1	2	3	Test tasks, situational tasks, home independent work, teacher survey, abstracts.
14	8	Binocular vision. Strabismus.			1		1	Test tasks, situational tasks, home independent work, teacher survey, abstracts.
15	8	Modular lesson. Reports in the framework of IRWS. Test of practical skills. Testing of theoretical knowledge.			3		3	Test tasks, visual control, abstracts.
ИТОГО:			20		52	36	108	

6. The list of educational and methodological support for independent work of students in the discipline

№	№ semester's	The name of the educational-methodical development
1.		Collection "Course of lectures for students of medical faculty".
2.		Course of multimedia lectures on ophthalmology for students of medical faculty.

3.	8	Teaching AIDS for practical training in ophthalmology for students of the faculty of medicine.
4.		Methodical recommendations for mastering practical skills in ophthalmology.
5.		Multimedia tutorial on mastering practical skills in ophthalmology for students.
6.		Collection of test questions for students of the faculty of medicine.
7.		Collection of situational problems in ophthalmology.
8.		Collection of individualized tasks for independent work of students of the Faculty of Medicine
9.		Textbook "Anatomical and histological features, functions and methods of examination of the fibrous capsule of the eye"
10.		Textbook" Anatomical and histological features, functions and methods of examination of the iris"
11.		Textbook "Vascular membrane of the eye: anatomical and histological features, functions and methods of research"
12.		Textbook" Retina of the eye: anatomical and histological features"
13.		Textbook" Visual pathways and centers"
14.		Textbook "Chambers and drainage system of the eye"
15.		Textbook " Anatomical and histological features and functions of the lens and vitreous body"

7. Fund evaluation funds for intermediate certification of students in the discipline

№	List of competencies	№ semester's	Indicator(s) assessments	Evaluation criterion(s)	Grading scale	Name FEF
1	2	3	4	5	6	7
1.	GPC-4; PC-2; PC -3; PC -4.	8	See the standard for evaluating the quality of education approved by order No. 264/o of the FSBEI of HE NOSMA of the Ministry of health of Russia of July 10, 2018	See the standard for evaluating the quality of education approved by order No. 264/o of the FSBEI of HE NOSMA of the Ministry of health of Russia of July 10, 2018	See the standard for evaluating the quality of education approved by order No. 264/o of the FSBEI of HE NOSMA of the Ministry of health of Russia of July 10, 2018	Fund of evaluation funds in ophthalmology for 4th year students in the specialty 31.05.01 Medical business

8. The list of basic and additional educational literature necessary for the development of the discipline

№№	Name	Author (s)	Year, place of publication	Number of copies		EBS name/EBS link
				in library	on department	
1	2	3	4	5	6	7
Main literature						

1.	Ophthalmology: textbook.	E.I. Sidorenko.	Moscow: GEOTAR-Media, 2002-2013.	212	-	http://www.studmedlib.ru/book/I/SBN9785970418499.html
2.	Eye diseases: a textbook.	Egorov E.A., Epifanova L.M.	Moscow: GEOTAR-Media, 2013.	-	-	http://www.studmedlib.ru/book/I/SBN9785970426029.html
3.	Methodical manual on practical skills for students of medical, medical-preventive and pediatric faculties.	Koroev O.A., Koroev A.O.	Vladikavkaz, 2010.	60	-	
4.	Clinical lectures on ophthalmology: a textbook.	Egorov E.A., Basinsky S.N.	Moscow: GEOTAR-Media 2007.	12	-	http://www.studmedlib.ru/book/I/SBN9785970404058.html
Additional literature						
5.	Drugs most commonly used in ophthalmology.	Sozaeva M.A., Laitadze I.A.	Vladikavkaz, 2011.	4	-	
6.	Ophthalmology: a national guide.	Ed. S.E. Avetisov	Moscow: GEOTAR-Media, 2011.	2	-	
7.	Офтальмология: Клинические рекомендации	Ed. L.K. Moshetova, A.P. Nesterov, E.A. Ergorov.	Moscow: GEOTAR-Media, 2006-2007.	17	-	
8.	The cornea: an Atlas.	Krachmer D., Paley D.	Moscow: Logosphaera, 2007.	2	2	
9.	Ophthalmology: Appendages of the eye.	Koroev O.A.	Rostov-on-don: Phoenix, 2007.	4	20	
10.	Emergency ophthalmology: a textbook.	Ed. Egorov E.A.	Moscow: GEOTAR-Media, 2006.	36	-	http://www.studmedlib.ru/book/I/SBN5970402613.html
11.	Ophthalmopharmacology: a guide for doctors	Egorov E.A., Astakhov Yu.S., Stavitskaya T.V.	Moscow: GEOTAR-Media, 2004.	5	-	
12.	Ophthalmopathology in General diseases: a guide	Tahchidi H.P. et al.	M.: Litterra. 2009.	-	-	http://www.studmedlib.ru/book/I/SBN9785904090197.html
13.	Ophthalmology: textbook	Alexeev V.N. et al.	Moscow: GEOTAR-Media, 2010.	-	-	http://www.studmedlib.ru/book/I/SBN9785970414774.html

9. The list of resources of the information and telecommunication network "Internet", necessary for the development of the discipline

1. The electronic library system of "Book" <http://books-up.ru/>
2. Oftalm.ru -Ophthalmology for all
3. www.EyeNews.ru

10. Guidelines for students on the development of the discipline

The discipline includes 72 hours of classroom work (21 lecture and 51 practical) and 36 hours of independent work. For mastering practical skills students use the methodical recommendations given in section 6. The theoretical foundations of the discipline are mastered using the recommended literature (sections 8) and educational and methodical literature (section 6). Internet resources are used for classes: Electronic library system "BookUP" <http://books-up.ru/>, Oftalm.ru -Ophthalmology for all, and www.EyeNews.ru. widely used classes in the library.

11. The list of information technologies used in the implementation of the educational process in the discipline

Used educational technologies in the study of this discipline 19% of interactive classes from the volume of classroom lessons

The following educational technologies are used:

"Intellectual duel" – a form of communicative and dialogue technology allows you to activate the competence of specialists on a particular topic; arrange mutual verification; exercise in the art of owning the means of eristics. Two duelists are invited to the center, who ask each other questions on the topic indicated by the presenter. The rest of the audience-seconds, who assess the quality of questions (problematicness, integration of theory and practice) and answers (conciseness, accuracy, artistry). The winner is determined by the voting method.

Innovative games are aimed at developing innovative thinking, behavior, ability to develop innovative projects, experimental approbation of innovations.

Research business games are aimed at developing concepts, experimental programs; forecasting possible consequences, potential problems in the implementation of innovations.

Certification (qualification) business games – are held to identify the level of competence, qualification of specialists in their certification, modeling the individual trajectory of professional and personal development and self-development.

Didactic (educational) business games are aimed at the development of reproductive and creative professional knowledge, skills and abilities.

Situational role-playing games involve playing different professional situations with different solutions to the problem; reproduction of the process of functioning of the pedagogical system in time; stimulate the manifestation of acting skills; contribute to the improvement of verbal and visual image, the development of assertiveness and disclosure of the charismatic potential of the specialist.

Problem lecture – at the problem lecture, the inclusion of students' thinking is carried out by the teacher through the creation of problem situations. Inclusion in a problem situation is characterized as the state of a person who has asked a question to himself about the unknown knowledge for him, the method of mental action or the principle of solving an educational problem.

Lecture visualization – is the result of the implementation of the principle of clarity. The teacher should use such forms of visibility, such visual materials that would not only complement the verbal information, but also act as its carriers. These include natural (natural materials, reagents, production parts), visual (slides, drawings, drawings, photos, videos) and symbolic reviews (logical reference schemes, tables).

12. Description of the material and technical base necessary for the implementation of the educational process in the discipline

№	Name of equipment	Quantity	Technical condition
1	2	3	4
Special equipment			
1.	Power lifts	2	Satisfactory
2.	Glass rods	5	Good
3.	Schirmer test strips	5	Good

4.	Set of conical and cylindrical probes for lacrimal tubules	1	Satisfactory
5.	Syringe with cannula for washing of the lacrimal ducts	1	Good
6.	Lenses in 13 and 20 diopters	8	Good
7.	Mirror Ophthalmoscope	8	Good
8.	Electric Ophthalmoscope	4	Satisfactory
9.	Binocular Ophthalmoscope	1	Good
10.	Slit lamp	2	Good
11.	The Tonometer Maklakova	2	Good
12.	Ultrasonic ophthalmic scanner	1	Good
13.	Avtokeratorefractometr	1	Good
14.	Apparatus Rota	1	Good
15.	Sivtsev Tables	1	Good
16.	Optotype projector	1	Satisfactory
17.	Projection perimeter	1	Satisfactory
18.	Rabkin Tables	1	Satisfactory
19.	Set of trial spectacle lenses	1	Good
20.	Eye drops and ointments	1	Good
Office equipment			
21.	A laptop	3	Good
22.	MFD	1	Good
23.	Multimedia projector	2	Good
24.	Printer	1	Good
25.	Scanner	1	Good

13. Conducting educational activities using e-learning and distance learning technologies

In the conditions of the introduction of restrictive measures (quarantine) associated with an unfavorable epidemiological situation, the threat of the spread of a new coronavirus infection and other force majeure events that do not allow conducting training sessions in full-time, it is possible to study this discipline or part of it with the use of e-learning and distance educational technologies.

Teaching the discipline in the above situations will be carried out through the development of an electronic course with access to video lectures and interactive course materials: presentations, articles, additional materials, tests and various tasks. When conducting training sessions, current performance monitoring, as well as intermediate certification of students, the platforms of the electronic information and educational environment of the academy and/or other e-learning systems recommended for use in the academy, such as Moodle, Zoom, Webinar, etc., can be used.

Lectures can be presented in the form of audio, video files, "live lectures", etc. Seminars and practical classes can be held on-line in both synchronous and asynchronous mode. Seminars can be held in the form of web conferences