



EDUCATIONAL TRAINING PROGRAM OF DISCIPLINE
“OPHTHALMOLOGY”

the main professional educational program of higher education - specialty program in the
specialty 31.05.01 General Medicine, approved, May , 24, 2023

Form of education Full-time -
The period of development 6
Department of otorhinolaryngology with ophthalmology

When developing an educational training program, the discipline is based on:

1. Federal State Educational Standard of Higher Education on specialty 31.05.01 General Medicine, approved by the Ministry of Education and Science of the Russian Federation on February, 09, 2016 №95

2. Academic plan on specialty 31.05.01 General Medicine,

ЛД-16-04-18 ИИ

ЛД-16-05-19 ИИ

ЛД-16-06-20 ИИ,

approved by the Scientific Council of the Federal State Budgetary Educational Institution of Higher Education «North-Ossetia State Medical Academy» of the Ministry of Healthcare of the Russian Federation “24” May 2023, Protocol № 8.

The educational training program of the discipline was approved at a meeting of the central coordinating training and methodological council from “23” May 2023, Protocol №. 5

The educational training program of the discipline was approved by the Scientific Council of the State Medical University of the Federal State Budgetary Educational Institution of Higher Education «North-Ossetia State Medical Academy» of the Ministry of Healthcare of the Russian Federation from “24” May 2023, Protocol № 8.

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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 compe- tence	The content of the competencies (or parts of it)	The learning outcomes of the		
			know	can	own
1	2	3			
1.	PC-5	<p>Readiness to collect and analyze patient complaints, medical history, examination results, laboratory, instrumental, pathologic-anatomical and other studies in order to recognize the condition or establish the presence or absence of the disease.</p> <p>Lesson 2. 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.</p>	Methods of examination of the visual organ (General examination, examination of complaints and anamnesis, external examination of the eye and its appendages).	To carry out external examination of the eye and its appendages, study by lateral illumination in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmometry, determination of corneal sensitivity, to produce eversion of the eyelid.	<p>External examination of the eye and surrounding tissues. Eversion of the eyelids. Determination of the presence of pathological contents in the lacrimal sac. Eye examination by focal lighting. Examination of the eye in transmitted light. Ophthalmoscopy. Biomicroscopy. Diaphanoscopy. Determination of the width of the angle of the anterior chamber by Vurgaft. Determination of binocular vision by indicative methods. Skiascopy. Determination of the type and strength of optical glass. Exophthalmo-</p>

					metry. Fixation of small children for eye examination. Tubular and nasal samples. Study of intraocular pressure. Determination of corneal integrity.
2.	PC-6	<p>The ability to determine the patient's main pathological conditions, symptoms, syndromes of diseases, nosological forms in accordance with the International statistical classification of diseases and health-related problems, X.</p> <p>Lesson 5. Diseases of the orbit, eyelids, conjunctiva and lacrimal organs.</p> <p>Lesson 6. Diseases of the cornea and sclera.</p>	<p>Principles of complex assessment of clinical picture, data of ophthalmological and laboratory research methods in diagnostics of diseases of orbit, eyelids, conjunctiva and lacrimal organs, methods of their prevention and treatment.</p> <p>Principles of complex assessment of clinical picture, data of ophthalmological and laboratory research methods of research in diagnostics of diseases of cornea and sclera.</p> <p>Principles of complex</p>	<p>Perform exophthalmometry. Own the technique of inspection of all departments of the conjunctiva. Examine and palpate the area of the lacrimal sac. Conduct therapeutic massage of the lacrimal sac. Diagnose the most common diseases of the orbit, eyelids, lacrimal organs and conjunctiva.</p> <p>Conduct a study of the eye side lighting. Conduct research 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 study of the eye side</p>	<p>Making a preliminary diagnosis of diseases of the orbit, eyelids, conjunctiva and lacrimal organs Making a decision on the subsequent medical tactics.</p> <p>Formulation of a preliminary diagnosis diseases of the cornea and the sclera. Decision-making on subsequent medical tactics.</p> <p>Preliminary diagnosis of</p>

		Lesson 7. Diseases of the vascular membrane of the eye.	assessment of clinical picture, data of ophthalmological and laboratory methods of research in diagnostics of diseases of a vascular cover.	lighting. To conduct a study in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy. To diagnose the main pathology of the vascular membrane.	diseases of the vascular tract. Decision-making on subsequent medical tactics.
		Lesson 8. Diseases of the retina and optic nerve. Eye manifestations of the most frequent common diseases of people of different ages, radiation lesions.	Principles of complex assessment of clinical picture, data of ophthalmological and laboratory research methods in diagnosis of retinal and optic nerve diseases, ocular manifestations of the most frequent common diseases.	Own the technique of inspection of all departments of the conjunctiva. Conduct a study of the eye side lighting. To conduct a study in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy.	Diagnosis of diseases of the retina and optic nerve, ocular manifestations of the most common diseases. Decision-making on subsequent medical tactics.
		Lesson 9. Diseases of the lens and vitreous.	Principles of complex assessment of clinical picture, data of ophthalmological and laboratory research methods in diagnosis of lens and vitreous diseases.	Conduct a study of the eye side lighting. Conduct a study in transmitted light, biomicroscopy. To diagnose cataracts and pathology of the vitreous body.	The preliminary diagnosis of diseases of the lens and vitreous. Decision-making on subsequent medical tactics.
		Lesson 10. Glaucomas.	Principles of comprehensive assessment of the clinical picture, data of ophthalmological and laboratory methods of research in the diagnosis of glaucoma.	Conduct a study of the eye side lighting. To conduct a study in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy. To investigate the intraocular pressure and visual field. To diagnose glaucoma.	Formulation of a preliminary diagnosis of glaucoma. Decision-making on subsequent medical tactics.
		Lesson 11. Neoplasms of the organ of vision.	Principles of complex assessment of clinical picture,	To carry out external examination of the eye and its	The preliminary diagnosis of tumors of the organ of vision.

			data of ophthalmological and laboratory methods of research in diagnostics of neoplasms of the organ of vision.	appendages, examination by lateral illumination in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmometry. Diagnosis of neoplasms of the visual organ.	Decision-making on subsequent medical tactics.
		Lesson 12. Damage to the organ of vision.	Principles of complex assessment of clinical picture, data of ophthalmological and laboratory methods of research in diagnostics of damages of an organ of sight.	To carry out external examination of the eye and its appendages, examination by lateral illumination in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry. Diagnose damage to the organ of vision.	Formulation of a preliminary diagnosis damage to the organ of vision. Decision-making on subsequent medical tactics.
		Lesson 13. Professional diseases of the eye.	Principles of complex assessment of clinical picture, data of ophthalmological and laboratory research methods in diagnostics of professional eye diseases.	To carry out external examination of the eye and its appendages, examination by lateral illumination in transmitted light, biomicroscopy, reverse and direct ophthalmoscopy, exophthalmometry, ophthalmometry. To diagnose occupational diseases of the eye.	Formulation of a preliminary diagnosis professional diseases of the eye. Decision-making on subsequent medical tactics.
		Lesson 15. Binocular vision. Strabismus.	Principles of complex assessment of clinical picture, data of ophthalmological	Determine visual acuity. Determine the nature of vision. Determine the type and strength of clinical	The preliminary diagnosis of pathology of the oculomotor apparatus. Decision-making

			and laboratory methods of research in diagnostics of pathology of oculomotor apparatus.	refraction subjective ways. Determine the nature of vision. Determine the type and strength of clinical refraction subjective ways. Determine the angle of strabismus by Hirschberg and synaptophore, determine heterophoria.	on subsequent medical tactics.
3.	PC-8	<p>Ability to determine the tactics of management of patients with various nosological forms.</p> <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>Lesson 8. Diseases of the retina and optic nerve. Eye manifestations of the most frequent common diseases of people of different ages, radiation lesions.</p>	<p>Tactics of management of patients with diseases of the orbit, eyelids, conjunctiva and lacrimal organs.</p> <p>Tactics of management of patients with diseases of the cornea and sclera.</p> <p>Tactics of management of patients with diseases of the vascular membrane of the eye.</p> <p>Tactics of management of patients with diseases of the retina and optic nerve. Interpretation and recommendations for the treatment of ocular manifestations of</p>	<p>Instill drops, lay ointment and wash the conjunctival cavity.</p> <p>Drops, lay the ointment, to give injections subconjunctival, retrobulbar, in tennova space.</p> <p>Drops, lay the ointment, to give injections subconjunctival, retrobulbar, in tennova space.</p> <p>Perform subconjunctival injections, retrobulbar injections, into the tenon space.</p>	<p>First aid and decision-making on subsequent medical tactics in diseases of the orbit, eyelids, conjunctiva and lacrimal organs.</p> <p>First aid and decision-making on subsequent medical tactics in diseases of the cornea and sclera.</p> <p>First aid and decision-making on subsequent medical tactics in diseases of the vascular membrane of the eye.</p> <p>Decision-making on the subsequent medical tactics in diseases of the retina and optic nerve, ocular manifestations of the most common diseases.</p>

			the most common diseases.		
		Lesson 9. Diseases of the lens and vitreous.	Tactics of management of patients with diseases of the lens and vitreous.	Drops, perform injections subconjunctival, retrobulbar, in tennova space.	Deciding on the follow-up clinical practice in diseases of the crystalline lens and the vitreous body.
		Lesson 10. Glaucomas.	Tactics of management of patients with different types of glaucoma.	Bury the drops. To measure the intraocular pressure.	Providing first aid in an acute attack of glaucoma and deciding on subsequent medical tactics for different types of glaucoma.
		Lesson 11. Neoplasms of the organ of vision.	Tactics of management of patients with tumors of the organ of vision.	Bury the drops.	Decision-making on the subsequent medical tactics in neoplasms of the organ of vision.
		Lesson 12. Damage to the organ of vision.	Tactics of management of patients with damage to the organ of vision.	To instill drops, to lay ointment and to wash out a conjunctival cavity, to carry out injections subconjunctival, retrobulbar, in tenon's space. To render first aid at penetrating wounds of an eye, at various types of burns. To master the technique of extraction of superficial foreign bodies, to impose mono - and binocular bandage.	First aid for wounds and burns of the eyes. Decision-making on the subsequent medical tactics in case of eye injuries.
		Lesson 15. Binocular vision. Strabismus.	Tactics of management of patients with diseases of the oculomotor apparatus.	Pick up corrective glasses. Determine the angle of strabismus.	Decision-making on the subsequent medical tactics in diseases of the oculomotor apparatus.

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	Semesters	
				№7	№8
				hours	hours
1	2	3	4	5	6
1	Contact work of students with teacher (total), including:	2	72	-	72
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)		credit (C)
		exam (e)	-	-	-
8	TOTAL: Total laboriousness	hours	108		108
		Total credits	3		3

5. The content of the discipline

№	№ semes-ter'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.	8	Collection "Course of lectures for students of medical faculty".
2.	8	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.	8	Methodical recommendations for mastering practical skills in ophthalmology.
5.	8	Multimedia tutorial on mastering practical skills in ophthalmology for students.
6.	8	Collection of test questions for students of the faculty of medicine.
7.	8	Collection of situational problems in ophthalmology.
8.	8	Collection of tasks for independent work for students of the faculty of medicine.

The authors of educational and methodological support are O.A. Korolev and A.O. Koroev

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.	PC-5; PC -6; PC -8.	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

Typical control tasks or other materials necessary for the assessment of knowledge, skills and (or) experience of activities that characterize the stages of competence formation in the process of mastering the educational program

for input control (IC)	What anatomical formations belong to the optical apparatus of the eye?
	Indicate the main symptoms characteristic of a creeping corneal ulcer.

	What are the tasks of medical and social expertise?
for current control (CC)	<p>The patient is 14 years old, went to the doctor in connection with the appearance of swelling of the eyelids of the right eye. The swelling appeared suddenly last night. He was not accompanied by any subjective complaints from the organ of vision. The day before the patient ate chocolate. Noted the itching of the inner surfaces of the forearms. Currently objectively. Visual acuity of both eyes = 1.0. The eyelids of the right eye are swollen. The swelling is mild, the skin above it is not hyperemic, to the touch - normal temperature. The eye slit is narrowed. The conjunctiva is not injected. Eye calm. Front section without visible changes. The fundus was normal. The left eye is healthy. The presumptive diagnosis? Treatment?</p> <p>To the patient of 61-th year at work on a personal plot in the right eye there was a piece of the earth. When referring to the oculist a few days ago, a foreign body was removed from the conjunctiva of the upper eyelid. However, the feeling of a foreign body continues to disturb. Decreased vision, appeared pain in the eye. Objectively. Visual acuity of the right eye = 0.09 (not corr.). Slight swelling and hyperemia of the eyelids. Pericorneal injection of the eyeball. The cornea is edematous. Paracentral corneal ulcer is a Crescent shape with saaped edges. In the anterior chamber, pus fills it 1/3. The iris is edematous, its pattern is faded. The pupil is narrow, does not respond to light. In the passing light, the red reflex. The fundus cannot be seen. Diagnosis? Treatment?</p> <p>A man of 46 years, went to the clinic with complaints of sudden loss of vision of the left eye. In the morning, his vision was normal. During washing noticed that the left eye suddenly began to see badly. Vision loss was not accompanied by pain. For 5-10 minutes, the eye went completely blind. The patient suffers from hypertension. Objectively. Visual acuity of the right eye = 1.0. Eye calm. Anterior segment of the eye without visible changes. The optical medium is transparent. On the fundus picture of hypertensive angiosclerosis. Visual acuity of the left eye = 0. The left eyeball is not injected. Anterior segment of the eye without visible changes. The optical medium is transparent. On the fundus of the eye, a clouded pale retina is determined. On its background, a bright red Central fossa stands out in the area of the yellow spot. Arteries are sharply narrowed. There are intermittent columns of blood in the small arteries. Vienna has not changed much. The disc of the optic nerve is pale, with a gray tinge. Diagnosis? First aid? Therapeutic measures?</p>
for intermediate control (IMC)	<p>If the main focus of the optical system of the eye is located behind the retina, then this type of refraction is called:</p> <ul style="list-style-type: none"> A – emmetropia; B – ametropia; C – myopia; D – hypermetropia; E – astigmatism. <p>Retinal pigment dystrophy is characterized by all symptoms except:</p> <ul style="list-style-type: none"> A – the presence of night blindness; B – the beginning of pigmentation in the Central parts of the retina; C – phenomena of atrophy of the optic nerve head; D – the presence of "bone cells" on the periphery of the retina; E – concentric narrowing of the field of vision. <p>Survey images of the eye socket with penetrating injury of the eyeball are carried out:</p> <ul style="list-style-type: none"> A – in all cases; B – only if there is a history of data on the introduction of a foreign body;

	C – only in cases where there are symptoms of fracture of the walls of the orbit; D – at localization of a splinter behind an eye; E – only in cases where it is impossible to use the Komberg-Baltin prosthesis.
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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	
				in library	on department
1	2	3	4	5	6
Main literature					
1.	Ophthalmology: textbook.	E.I. Sidorenko.	Moscow: GEOTAR-Media, 2002-2013.	212 http://www.studmedlib.ru/book/ISBN9785970418499.html	-
2.	Eye diseases: a textbook.	Egorov E.A., Epifanova L.M.	Moscow: GEOTAR-Media, 2013.	- http://www.studmedlib.ru/book/ISBN9785970426029.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/ISBN9785970404058.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.	Korojev O.A.	Rostov-on-don: Phoenix, 2007.	4	20
10.	Emergency ophthalmology: a textbook.	Ed. Egorov E.A.	Moscow: GEOTAR-Media, 2006. http://www.studmedlib.ru/book/ISBN5970402613.html	36	-
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/ISBN9785904090197.html	-	-
13.	Ophthalmology: textbook	Alexeev V.N. et al.	Moscow: GEOTAR-Media, 2010. http://www.studmedlib.ru/book/ISBN9785970414774.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	Satisfactory
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.	Scheme-localizer Baltin	1	Satisfactory
21.	Rubber bulb	1	Satisfactory.
22.	Eye drops and ointments	1	Good
Фантомы			
23.	not		
Муляжи			
24.	Skull	1	Satisfactory
25.	Eye	1	Satisfactory

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.