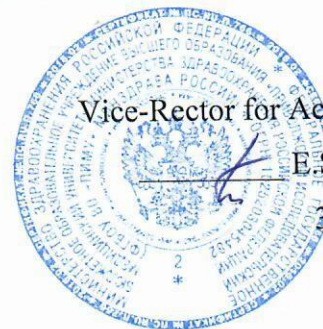


Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation



APPROVED

Vice-Rector for Academic Affairs

E.S. Bogomolova

31 August 2021

WORKING PROGRAM

Name of the academic discipline: **OPHTHALMOLOGY**

Specialty: **31.05.03 DENTISTRY**
(code, name)

Qualification: **DENTIST**

Department: **EYE DISEASES**

Mode of study: **FULL-TIME**

Labor intensity of the academic discipline: **72 academic hours**

Nizhny Novgorod
2021

The working program has been developed in accordance with the Federal State Educational Standard for the specialty **31.05.03 DENTISTRY**

(code, name)

approved by Order of the Ministry of Science and Higher Education of the Russian Federation No. № 984 от 12 августа 2020 г.

Developers of the working program:

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Associate Professor of the Department of Eye Diseases, FSBEI HE PRMU MOH Russia

The program was reviewed and approved at the department meeting (protocol No.13, March 29, 2021)

Head of the Department, Smetankin Igor Glebovich

Doctor of Medical Sciences, Associate Professor of the Department of Eye Diseases, FSBEI HE PRMU MOH Russia



I.G. Smetankin.

(signature)

March 29, 2021

AGREED

Deputy Head of EMA ph.d. of biology



Lovtsova L.V.

(signature)

March 29, 2021

1. The purpose and objectives of mastering the academic discipline__OPHTHALMOLOGY (hereinafter – the discipline):

1.1. The purpose of mastering the discipline: participation in the formation of competencies: UC-1, GPC-5, GPC-7, PC -6.

1.2. Tasks of the discipline:

1. As a result of mastering the discipline of ophthalmology, students should:

Universal competence

UC-1. Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy

GPC -5: Is able to conduct a patient examination in order to establish a diagnosis when solving professional tasks;

GPC -7: Able to organize work and make professional decisions in urgent conditions, in emergency situations, epidemics and in centers of mass destruction;

Professional Competencies (PC):

PC-6: readiness to collect, analyze complaints and other information from the patient (relatives/ legal representatives), his anamnesis data, interpretation of examination results, laboratory, instrumental, pathoanatomic and other studies in order to recognize the condition or establish the presence or absence of dental disease, symptoms, syndromes of dental diseases, establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Health-Related Problems, and other regulatory documents of the Ministry of Health of the Russian Federation (the procedure for the provision of medical care, the Standard of medical care, Clinical recommendations on the provision of medical care, etc.).

Tasks of mastering the discipline of Ophthalmology:

As a result of mastering the discipline of ophthalmology, students must:

To know:

- methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis
- the main clinical manifestations of diseases of the eye and its accessory apparatus, features of their diagnosis and observation;
- the clinical picture and the basics of diagnosis and methods of primary medical care for emergency conditions and damage to the organ of vision and its accessory apparatus;
- features of the clinical course of odontogenic inflammatory diseases of the organ of vision and orbit, combined pathology of the eye and dental system, methods of their treatment.

Be able to:

- interpret the results of the examination, make a preliminary diagnosis to the patient, outline the scope of additional studies to clarify the diagnosis, formulate a clinical diagnosis;
- determine the condition requiring urgent medical care that goes beyond the competence of a general practitioner dentist and immediately contact the appropriate specialists;
- to justify pharmacotherapy in a particular patient with major pathological syndromes and urgent conditions, to determine the methods of administration, regimen and dose of medications, to assess the safety and effectiveness of the treatment

Possess:

- assessment of ophthalmological status in diseases and injuries of the maxillofacial region;
- interpretation of the results of laboratory, instrumental diagnostic methods in patients of different ages with pathology of the organ of vision;
- making a preliminary diagnosis to patients and, if necessary, with their subsequent referral for

additional examination and to specialist doctors, by an algorithm for making a detailed clinical diagnosis;

- performing basic medical diagnostic and therapeutic measures to provide first aid to victims of emergency conditions in ophthalmology.

2. Position of the academic discipline in the structure of the General Educational Program of Higher Education (GEP HE) of the organization.

2.1. The discipline _____ ophthalmology_____ refers to the core part (or *the part formed by the participants of educational relations*) of Block 1 of GEP HE (Academic discipline index).

The discipline is taught in __7__ semester/ __4__ year of study.

2.2. The following knowledge, skills and abilities formed by previous academic disciplines are required for mastering the discipline:

- 1). Normal human anatomy is the anatomy of the head and neck.
- 2). Normal physiology, physiology of the maxillofacial region
- 4). Internal diseases.
- 5). Pharmacology.

2.3. Mastering the discipline is required for forming the following knowledge, skills and abilities for subsequent academic disciplines:

- 1). Neurology.
- 2). Internal diseases.
- 3). Maxillofacial surgery.

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

п/№	Competence code	Содержание компетенции (или ее части)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				know	be able to	possess
1.	UK 1	Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy	1.1 Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis 1.2 Able to: gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and	basic principles and methods of information collection and analysis	to identify and systematize the main ideas in scientific texts; to critically evaluate any incoming information, regardless of the source, - to use in practice.	skills of collecting, processing, analyzing and systematizing information on the research topic; skills of choosing methods and means of solving research problems..

			<p>solutions based on action, experiment and experience</p> <p>1.3 Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems</p>			
2	GPC 5	Is able to conduct a patient examination in order to establish a diagnosis when solving professional tasks	<p>5.1 Knows the methodology of collecting anamnesis of life and diseases, complaints in children and adults (their legal representatives); the methodology of examination and physical examination; clinical picture, methods of diagnosis of the most common diseases; methods of laboratory and instrumental studies to assess the state of health, medical indications for research, rules for interpreting their results; international statistical classification diseases and health-related problems (ICD); conditions requiring urgent medical care</p> <p>5.2 Is able to: collect complaints,</p>	<p>- the main clinical manifestations and diagnostic signs of emergency conditions in ophthalmology</p> <p>- basic methods of examination of an ophthalmological patient;</p> <p>- basics of choosing modern laboratory and instrumental diagnostics</p> <p>- the basics of providing first aid to adults and adolescents in emergency conditions in ophthalmology</p>	<p>- collect anamnesis of the disease and life; determine the need for special research methods and evaluate their results;</p> <p>- to conduct an instrumental examination of the organ of vision; - to carry out laboratory tests and be able to interpret them, to examine for various diseases and traumatic injuries of the organ of vision;- interpret and analyze the results of consultations by specialist doctors</p>	<p>-the method of examination of a patient with a pathology of the organ of vision; the method of drawing up an individual examination plan for making a preliminary diagnosis of the underlying and concomitant diseases, their complications</p> <p>- methods of modern laboratory and instrumental diagnostics (in a hospital, polyclinic)</p> <p>- the main medical diagnostic and therapeutic techniques</p>

		<p>anamnesis of life and disease in children and adults (their legal representatives), identify risk factors and causes of diseases; apply methods of examination and physical examination of children and adults; interpret the results of examination and physical examination of children and adults; diagnose the most common pathology in children and adults; identify factors risk of cancer; formulate a preliminary diagnosis, make a plan for laboratory, instrumental and additional studies in children and adults in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; send children and adults to laboratory, instrumental and additional studies in accordance with the current procedures for providing dental medical care, clinical recommendations, taking into account standards of medical care; refer children and adults for</p>		<p>- formulate a diagnosis and determine an action plan;.</p>	<p>for providing first aid in emergency conditions of the organ of vision.</p>
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		<p>consultations with specialist doctors in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; interpret and analyze the results of consultations by specialist doctors for children and adults; interpret and analyze the results of basic (clinical) and additional (laboratory, instrumental) examination methods; conduct differential diagnostics diseases in children and adults; to identify clinical signs of sudden acute diseases, conditions, exacerbations of chronic diseases without obvious signs of life-threatening, requiring urgent medical care</p> <p>5.3 Has practical experience in: collecting complaints, anamnesis of life and disease in children and adults (their legal representatives), identifying risk factors and causes of diseases; examination and physical examination</p>			
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		<p>of children and adults; diagnosis of the most common diseases in children and adults; identification of risk factors for major oncological diseases; formulation of a preliminary diagnosis, compilation the plan of carrying out instrumental, laboratory, additional studies, consultations of specialist doctors; referrals of patients for instrumental, laboratory, additional studies, consultations of specialist doctors in accordance with current medical care procedures, clinical recommendations, taking into account medical care standards; interpretation of data from additional (laboratory and instrumental) examinations of patients; making a preliminary diagnosis in accordance with the international statistical classification of diseases and health-related problems (ICD); differential diagnosis of diseases; recognition of conditions arising from sudden acute diseases, exacerbation of</p>			
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			chronic diseases without obvious signs of a threat to the patient's life and requiring urgent medical care			
3	GPC 7	Be able to organize work and make professional decisions in urgent conditions, in emergency situations, epidemics and in centers of mass destruction	7.1 Knows: methods of collecting complaints and anamnesis from patients (their legal representatives); methods of physical examination of patients (examination, palpation, percussion, auscultation); principles and methods of providing medical care to patients in urgent conditions, in emergency situations, epidemics and in foci of mass destruction in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; clinical signs of major emergency conditions; principles of medical evacuation in emergency situations, epidemics and in centers of mass destruction; principles of work in centers of mass destruction 7.1 Knows: methods of	-the main clinical manifestations and diagnostic signs of emergency conditions in ophthalmology , - the main methods of diagnosis of an ophthalmological patient - basic medical techniques for providing first aid to patients with eye diseases and injuries	- collect anamnesis of the disease and life; determine the need for special research methods and evaluate their results; to carry out diagnostics and differential diagnostics of emergency conditions in ophthalmology.	--: skills of conducting a general examination of the organ of vision, examination of visual functions, examination of the eyeball by the main methods of examination of an ophthalmological patient; - skills in interpreting the results of laboratory and instrumental diagnostic methods -the algorithm of a detailed clinical diagnosis - the main medical diagnostic and therapeutic techniques for providing first aid in case of emergency conditions of the organ of vision

			<p>collecting complaints and anamnesis from patients (their legal representatives);</p> <p>methods of physical examination of patients (examination, palpation, percussion, auscultation);</p> <p>principles and methods of providing medical care to patients in urgent conditions, in emergency situations, epidemics and in foci of mass destruction in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; clinical signs of major emergency conditions; principles of medical evacuation in emergency situations, epidemics and in centers of mass destruction;</p> <p>principles of work in centers of mass destruction, OPK 7.2 is able to: recognize conditions that require medical care in an emergency form, including in emergency situations, epidemics and in centers of mass destruction that require medical care</p>			
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			<p>in an emergency form; to organize the work of medical personnel in emergency conditions, in emergency situations, epidemics and in centers of mass destruction; provide emergency medical care to patients in conditions that pose a threat to the life of patients, including clinical death (stopping vital functions of the human body (blood circulation and (or) respiration); use medicines and medical devices when providing medical care in emergency conditions; perform basic cardiopulmonary resuscitation; use funds personal protection;</p> <p>IOPK-7.3 Has practical experience in: assessing a condition requiring emergency medical care, including in emergency situations, epidemics and in foci of mass destruction; recognizing conditions that pose a threat to life, including a state of clinical death (stopping vital functions of the human body (blood</p>			
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			<p>circulation and (or) respiration), requiring medical assistance in an emergency form; providing emergency medical care to patients in conditions that pose a threat to the life of patients, including clinical death (stopping vital functions of the human body (blood circulation and (or) breathing); the use of medicines and medical devices in the provision of medical care in emergency conditions and epidemics; the use of personal protective equipment emergency medical care; provision of emergency medical care to patients in conditions that pose a threat to the life of patients, including clinical death (stopping vital functions of the human body (blood circulation and (or) respiration); the use of medicines and medical devices in the provision of medical care in emergency conditions and epidemics; the use of funds personal protection</p>			
5	PC 6	readiness to collect, analyze complaints and other information	6.1 Knows: The method of collecting complaints	- the main clinical manifestations	- collect anamnesis of the	- the skills of conducting a general

		<p>from the patient (relatives/legal representatives), his anamnesis data, interpretation of examination results, laboratory, instrumental, pathoanatomic and other studies in order to recognize the condition or establish the presence or absence of dental disease, symptoms, syndromes of dental diseases, establishment of nosological forms in accordance with International statistical classification of diseases and health-related problems, and other regulatory documents of the Ministry of Health of the Russian Federation (the procedure for providing medical care, the Standard of medical care, Clinical recommendations on the provision of medical care, etc.)</p>	<p>and anamnesis from patients (their legal representatives). Methods of physical examination of patients (examination, palpation, percussion, auscultation). The procedure for providing medical care to adults with dental diseases The procedure for providing medical care to children with dental diseases Clinical recommendations on the provision of medical care to patients with dental diseases Standards of medical care ИИК 6.2.Can: interpret the results of examination, laboratory, instrumental, pathoanatomic and other studies in order to recognize the condition or establish the presence or absence of dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Health-related Problems and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for medical care, Standard of medical care, Clinical recommendations on</p>	<p>and diagnostic signs of ophthalmological pathology combined with pathology of the dental system, - the main methods of diagnosis of an ophthalmic patient.</p>	<p>disease and life; - conduct a survey and examination of the eyeball and its accessory apparatus - determine the need for special research methods and evaluate their results;</p>	<p>examination of the organ of vision, the study of visual functions, - skills in interpreting the results of laboratory and instrumental diagnostic methods -skills of making a preliminary diagnosis based on complaints, anamnesis, examination results and the results of instrumental and laboratory tests</p>
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			<p>the provision of medical care, etc.) Develop a treatment plan for children and adults with dental diseases in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care.</p> <p>6.3 Has practical experience: interpretation of the results of examination, laboratory, instrumental, pathoanatomic and other studies in order to recognize the condition or establish the presence or absence of dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Health-related Problems, and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for medical care, Standard of medical care, Clinical recommendations on the provision of medical care, etc.) Development of a treatment plan for children and adults with dental diseases, taking into account the diagnosis, age and clinical picture</p>			
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			in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care			
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4. 4. Sections of the academic discipline and competencies that are formed when mastering them

№ п/п	Competence code	Section name of the discipline	The content of the section in teaching units
1	2	3	4
1.1	UC-1, GPC-5	Clinical anatomy, physiology of the organ of vision and its accessory apparatus	<p>The organ of vision in anatomical and physiological terms</p> <ul style="list-style-type: none"> - embryogenesis of the auxiliary apparatus of the eye and orbit - anatomy of the bone orbit - the ratio of the orbit and paranasal sinuses, the cranial cavity. - anatomy of the auxiliary apparatus of the eye - fibrous capsule of the eye and its purpose - anatomy and histology of the vascular membrane of the eye - anatomy and histology of the retina - anatomy of the vitreous body - anatomy of the lens – - anatomy of the optic nerve and the visual pathway

1.2	UC-1, GPC-5,7	Methods of examination of the visual organ and its accessory apparatus	<p>The visual analyzer is the main organ of cognition of the external world, anatomical and physiological features of the visual pathway</p> <ul style="list-style-type: none"> - the concept of central vision (visual acuity, visual angle) - peripheral vision - visual adaptation - color perception - binocular vision - external examination of the eye and its appendages - examination of the anterior segment of the eyeball - study of the transparency of refractive and light-conducting media of the eye - methods and principles of ophthalmoscopy - biomicroscopy - methods of studying intraocular pressure - ultrasound methods of eye and orbit examination - radiation research methods in ophthalmology
1.3	GPC-5,7, PC-6	Diseases of the orbit, eyelids, lacrimal organs	<p>General semiotics and classification</p> <ul style="list-style-type: none"> - anomalies of eyelid development - inflammatory diseases of the eyelids: blepharitis, barley, chalazion (etiopathogenesis, clinic, diagnosis, treatment methods) <p>Inflammatory diseases - orbits,</p> <ul style="list-style-type: none"> - tear - producing - tear - conducting apparatus - Possible complications
1.4	GPC-5,7, PC-6	Conjunctival and corneal diseases	<ul style="list-style-type: none"> - inflammatory diseases of the conjunctiva (etiopathogenesis, - classification, clinic, diagnosis, treatment) - inflammatory - Keratitis: the relevance of the problem - etiopathogenesis - classification - clinic of bacterial and herpetic keratitis - diagnostics - treatment prevention

1.5	GPC-5,7, PC-6	Pathology of the vascular tract. Pathology of the lens.	Inflammatory diseases of the vascular membrane of the eye (etiopathogenesis, classification, diagnosis) - anterior uveitis, diagnostic signs, principles of treatment - posterior uveitis, main clinical manifestations, treatment. - Cataracts, the urgency of the problem. - etiopathogenesis - classification - clinic - diagnostics - conservative methods of treatment - surgical methods of treatment - aphakia, diagnostic signs, correction methods.
1.6	GPC-5,7, PC-6	Glaucoma	Hydrodynamics of the eye. Glaucoma: classification, etiopathogenesis of various forms of glaucoma - - pathogenesis of glaucoma opticoneuropathy - clinic of open-angle and closed-angle forms of glaucoma - methods of early diagnosis of minutes --conservative treatment, methods of surgical treatment of open- and closed-angle forms of glaucoma. - secondary glaucoma, treatment methods
1.7.	GPC-5,7, PC-6	Mechanical and chemical injuries of the visual organ	- Modern classification of visual organ injuries - mechanical open injury of the visual organ (injuries of the orbit, the auxiliary apparatus of the eye, the eyeball): absolute and relative signs, clinic, diagnosis, complications. - - intraocular foreign bodies (classification, metals) - the concept of sympathetic inflammation (etiopathogenesis, clinic, treatment, prevention). - chemical burns of the visual organ (acid, alkaline). - thermal burns of the visual organ - emergency measures for various types of burn injury.

5. Volume of the academic discipline and types of academic work

Type of educational work	Labor intensity				Labor intensity (AH) in semesters		
	volume	in	volume	in	VII	4	5
	credit	units	academic	academic			

	(CU)	hours (AH)	семестр		
Classroom work, including		44	44		
Lectures (L)	0.28	10	10		
Laboratory practicum (LP)*					
Practicals (P)	0.94	34	34		
Seminars (S)					
Student's individual work (SIW)	0.78	28	28		
Mid-term assessment					
credit/exam (<i>specify the type</i>)		зачет			
TOTAL LABOR INTENSITY	2	72	72		

6. Content of the academic discipline

6.1. Sections of the discipline and types of academic work

	Name of the section of the academic discipline	Types of academic work* (in AH)					total
		L	LP	P	S	SIW	
1	Ophthalmology	10		34		28	
1.1	Clinical anatomy of the organ of vision and its appendages Physiology of the organ of vision			5		5	10
1.2	Methods of eye examination			5			5
1.3	Diseases of the orbit, lacrimal apparatus	2		5		5	12
1.4	Diseases of the eyelids, conjunctiva			4		2	6
1.5	Diseases of the cornea, uveal tract	2		5		4	11
1.6	Pathology of the lens	2		2		2	6
1.7	Glaucoma	2		3		2	7
1.8	Thermal and radiation damage to the visual organ			2		5	7
1.9	Mechanical damage to the organ of vision	2		3		3	8
TOTAL		10		34		24	72

* - L – lectures; LP – laboratory practicum; P – practicals; S – seminars; SIW – student's individual work.

6.2. Thematic schedule of educational work types:

6.2.1 Thematic schedule of lectures

№	Name of lecture topics	Volume in AH	
		VII Semester	semester
1	Introduction to ophthalmology. Clinical anatomy of the visual organ and its adnexal apparatus	0.5 AH 1.5 AH	
2	Diseases of the eyelids.. Pathology of the conjunctiva		
3	Pathology of the cornea.	2.0 AH	
4	Diseases of the uveal tract		
5	Pathology of the lens	2.0 AH	
6	Glaucoma	2.0 AH	
7	Damage to the organ of vision	2.0 AH	
	TOTAL (total - AH)	14 AH	

6.2.2. The thematic plan of laboratory practicums (*if this type of classes is stipulated in the curriculum*)

6.2.3. Thematic plan of practicals

№	Name of practicals	Volume in AH	
		VII semester	semester
1	Anatomy and histology of the eye. Physiology of the organ of vision, clinical refraction, its anomalies, methods of correction	5AH	
3	Clinical examination of the patients with the pathology of the eye and its additional structures	5 AH	
4	Diseases of the orbit, lacrimal apparatus, Pathology of the eyelids and conjunctiva	3 AH 3 AH	
5	Diseases of the cornea. Pathology of the uveal tract	5 AH 2 AH	
6	Pathology of the lens: cataract.	2 AH	
7	Glaucoma. Intraocular pressure measurement	4 AH	
8	Ocular trauma..	5 AH	
	TOTAL (total - AH)	34 AH	

6.2.4. Thematic plan of seminars (*if this type of classes is stipulated in the curriculum*)

6.2.5. Types and topics of student's individual work (SIW)

II/№	Types and topics of SIW	Volume	in
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		AH
1.	Working with literature sources and electronic educational resources: Clinical anatomy of the organ of vision and its appendages. Physiology of the organ of vision.	5 АЧ
2.	Preparation of the abstract. Infectious lesions of the orbit. Inflammation of the bone walls of the orbit, anterior and posterior periostitis. Subperiosteal abscess of the orbit. Tenonites. Phlegmon of the orbit. Diagnostics. Urgent measures. Principles of treatment. Complications. Odontogenic lesions of the orbit.	5 АЧ
3.	Work with electronic educational resources posted on the educational portal of the University: Pathology of the eyelids and conjunctiva..	2 АЧ
4.	Work with electronic educational resources posted on the educational portal of the University: Pathology of the uveal tract	2 АЧ
5.	Working with electronic educational resources posted on the educational portal of the University: Burns and frostbite of the visual organ	2 АЧ
4.	Registration of the medical history: Topics: Diseases of the orbit, lacrimal organs. Diseases of the eyelids, conjunctiva, cornea, vascular tract. Pathology of the lens. Glaucoma. Writing and defending the medical history of a patient with a pathology of the organ of vision according to the proposed plan with a detailed clinical diagnosis, differential diagnosis and treatment recommendations.	4 АЧ
7.	Preparation for participation in the lesson in an interactive form: Topic: mechanical damage to the organ of vision. Damage to the auxiliary organs of the eye and eye socket. Through and through wounds of the eyelids. Eyelid tears. Conjunctival injuries. Surgical treatment of eyelid and conjunctival wounds. Damage to the eye socket. General characteristics, classification. Damage to bone walls, soft tissues. Radiation research methods. Complications. Principles of treatment. Contusion of the eyeball. Etiopathogenesis. Clinical variants of injuries. Degrees of severity. Differential diagnosis. The consequences of contusion injuries. Treatment	3 АЧ
8.	Preparation for participation in the lesson in an interactive form: Topic: Thermal, chemical and radiation damage to the organ of vision. damage to the organ of vision.	5 АЧ
	TOTAL (total - AH)	28 АЧ

7. Types of assessment formats for ongoing monitoring and mid-term assessment

№ п/п	Se mes ter No.	Types of control	Name of section of academic discipline	Assessment formats			
				Competence codes	types	number of test questions	number of test task options
1	VII Cur rent mo nito	Control of masteri ng the topic	Anatomy of the eye	UC-1, GPC-5	Test tasks	25	Unlimited (during computer testing)
					control questions	1	30

ring	Monitoring the student's individual work	Refraction of the eye	UC-1, GPC-5,7	Test tasks	15	Unlimited
				control questions	1	15
		Diseases of the eyelids, pathology of the conjunctiva, lacrimal tract..	GPC-5,7, PC-6	Test tasks	20	Unlimited
				Clinical cases	1	15
		Diseases of the cornea.	GPC-5,7, PC-6	Test tasks	10	Unlimited
				Clinical cases	1	5
		Pathology of the uveal tract	GPC-5,7, PC-6	Test tasks	10	Unlimited
				Clinical cases	1	5
				control questions	1	15
		Pathology of the lens.	GPC-5,7, PC-6	Test tasks	15	Unlimited
				Test tasks ы	2	15
		Glaucoma	GPC-5,7, PC-6	Test tasks	20	Unlimited
				control questions	1	15
		Ocular trauma	GPC-5,7, PC-6	Test tasks	20	Unlimited
				Clinical cases	1	10
Mid-term assessment	control questions	All sections of the discipline			2	40
	Clinical cases	All sections of the discipline			1	40

8. Educational, methodological and informational support for mastering the academic discipline (printed, electronic publications, the Internet and other network resources)

8.1. Key literature references

№	Name according to bibliographic requirements	Number of copies	
		at the department	in the library
1	Alekseev V.N. Ophthalmology [Electronic resource] : textbook / Alekseev V.N., Astakhov Yu.S., Basinsky S.N. et al. ; Edited by E.A. Egorov - M. : GEOTAR-Media, 2016. – http://www.studmedlib.ru/book/ISBN9785970436776.html	-	30
2	Kopaeva V.G. Eye diseases: textbook for medical students / ed. by V.G. Kopaeva.- 2nd ed., ispr.- M.: Medicine, 2012.-560s.	1	30
3	Sidorenko E.I., Ophthalmology : textbook / edited by E. I. Sidorenko. - 4th ed., ispr. and add. - M. : GEOTAR-Media, 2018. - 656 p. : ill.		

8.2. Further reading

№	Name according to bibliographic requirements	Number of copies	
		at the department	in the library
1	Avetisov S.E. Ophthalmology : National guidelines / edited by S.E.		

	Avetisov, E.A. Egorov, L.K. Moshetova, V.V. Neroev, H.P. Takhchidi ; Publishing house of the organization Society of Ophthalmologists of Russia. – M. : GEOTAR-Media, 2008. – 944 p. : il. tv. + 1 CD-Rom. – (National guidelines)	
2	Avetisov S.E. Atlas of ophthalmology : textbook for students of medical universities / G. K.Kriglstein, K.P. Ionescu-Saypers, M. Severin, M. A. Vobig ; ed. S. E. Avetisov. – M.: Medical Information Agency, 2009. – 432 p.	
3	Avetisov, E.S. Fundamentals of ophthalmology : textbook / E.S. Avetisov, V.G. Kopaeva; Avetisov E.S. ; Kopaeva V.G. - Moscow : Medicine, 2012. - - 552 p. - ISBN ISBN 978-5-225-10009-4. - Text : electronic. - URL: https://www.studentlibrary.ru/book/ISBN9785225100094.html	
4	Gundorova R.A. Eye injuries in emergency situations / R.A. Gundorova, V. V. Kashnikov. – N.Novgorod : SB RAMS, 2002. – 240 p.	
5	Gundorova R.A. Eye injuries / general ed. R. Gundorova, V. V. Neroev, V. V. Kashnikov. – 2nd ed., reprint, and supplement - M : GEOTAR-Media, 2014. – 560 s	
6	Egorov, E.A. Emergency ophthalmology: textbook /E.A. Egorov, A.V. Svirin, E.G. Rybakova et al. – M.: GEOTAR-MED, 2006. – 184 p.	
7	Egorov, E.A. Eye diseases : textbook [electronic resource] / E.A. Egorov, L.M. Epifanova; Egorov E.A. ; Epifanova L.M. - Moscow : GEOTAR-Media, 2013. - 160 p. - Text : electronic. - URL: https://www.studentlibrary.ru/book/ISBN9785970426029.html	
8	Evgrafov, It Is. I. Cataracts / E. I. Evgrafov, I. O. It is. Batmanov. - M.: Med., 2005. - 368 S.	
9	Katsnelson, L.A. Clinical atlas of fundus pathology (illustrated reference) / L.A. Katsnelson, V.S. Lysenko, T.I. Balishanskaya - M.: GEOTAR-MED, 2004. - 120c.	
10	Nesterov, Huh.P. Glaucoma/A. P. Nesterov. - M: Medicine, 1995. - 356 C.	
11	Morozov V.I. Diseases of the visual pathway. Clinic. Diagnostics. Treatment / V. I. Morozov, A. A. Yakovlev. – M. : BINOM, 2010. – 680 p.	
12	Somov, E.E. Medicines in modern ophthalmological practice /E.E. Somov. – M.: Medpress-inform, 2003. – 64 p.	
13	Sidorenko E.I. Ophthalmology [Electronic resource] : textbook / edited by E. I. Sidorenko. - 3rd ed., reprint. and additional - M. : GEOTAR-Media, 2015.- - http://www.studmedlib.ru/book/ISBN9785970433928.html	
14	Svirin A.V. Emergency ophthalmology : a textbook for universities / A.V. Svirin, E. G. Rybakova, T. V. Stavitskaya, T. M. Volobueva, T. B. Romanova, edited by E. A. Egorov. – 2nd ed., ispr. – M. : GEOTAR-Media, 2007. – 184 p.	

8.3. Electronic educational resources for teaching academic subjects

8.3.1. Internal Electronic Library System of the University (IELSU)

<i>№</i>	<i>Name of the electronic resource</i>	<i>Brief description (content)</i>	<i>Access conditions</i>	<i>Number of users</i>
	Internal Electronic Library System (EBS) of PIMU	The works of the staff of the ADMU (textbooks, manuals, collections of tasks, manuals, laboratory work, monographs, etc.)	Access by individual login and password from any computer and mobile device	Unlimited

8.3.2. Electronic educational resources acquired by the University

<i>№</i>	<i>Name of the electronic resource</i>	<i>Brief description (content)</i>	<i>Access conditions</i>	<i>Number of users</i>
1	Database "Medicine. Healthcare (VO) and "Medicine. Healthcare (SPO)" as part of the database "Electronic library of a technical university (EBS "Student Consultant"	Textbooks and teaching aids for higher medical and pharmaceutical education.	Access by individual login and password from any computer and mobile device	Unlimited
2	Database "Doctor's consultant. Electronic Medical Library"	National guidelines, clinical guidelines, textbooks, monographs, atlases, reference books, etc.	Access by individual login and password from any computer and mobile device	Unlimited
3	Database "Electronic library system "Bukap"	Educational and scientific medical literature of Russian publishers, including translated editions. The collection of subscription publications is formed point-by-point.	Access by individual login and password from any computer and mobile device	Unlimited
4	Electronic periodicals as part of the database "SCIENTIFIC ELECTRONIC LIBRARY eLibrary"	Electronic medical journals	Access by individual login and password from any computer and mobile device	Unlimited

8.3.3 Open access resources

<i>№</i>	<i>Name of the electronic resource</i>	<i>Brief description (content)</i>	<i>Access conditions</i>
	Federal Electronic Medical Library of the Central Medical Library of the I.M. Sechenov First Moscow State Medical University http://feml.scsml.rssi.ru/feml	FEML includes both full-text electronic copies of printed publications and independent original electronic publications that have no analogues recorded on traditional media.	
	Open Access Scientific Library "CyberLeninka" http://cyberleninka.ru/about	The library is equipped with full texts of articles published in scientific journals of Russia and neighboring countries, including in journals included in the list of the Higher Attestation Commission of the Russian	

		Federation. Electronic copies of the documents are publicly available with the possibility of downloading.	
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9. Material and technical support for mastering an academic discipline

9.1. List of premises for classroom activities for the discipline

The teaching of the discipline is carried out on the basis of the state health institution – State Budgetary Healthcare Institution of the Nizhny Novgorod region Regional Clinical Hospital named after N.A. Semashko

The department has 3 study rooms, and the lecture hall of the hospital is used for reading individual lectures. Use of wards, laboratories, laboratory and instrumental equipment, study rooms for students' work

9.2. List of equipment for classroom activities for the discipline

1. Technical means.

2. Sets of ophthalmoscopes

3. A set of skiascopic rulers

4. Electrophthalmoscope

5. Exophthalmometer

6. Sets of optical glasses

7. The perimeter of the Foerster

8. Projection perimeter

9. Rota apparatus

10. Slit lamps

11. Tonometers

12. Ophthalmometer

2. Stands.

1. The eye in general pathology

2. Classification of burns

3. Damage to the organ of vision

4. Glaucoma

5. Classification of primary glaucoma

6. The structure of the front camera angle

1. Multimedia complex (laptop, projector, screen), TV, video camera, slide show, video recorder, PC, video and DVD players, monitors. Sets of tables/multimedia visual materials on various sections of the discipline. Videos. Situational tasks, test tasks on the topics being studied.

9.3. A set of licensed and freely distributed software, including domestic production

Item no.	Software	number of licenses	Type of software	Manufacturer	Number in the unified register of Russian software	Contract No. and date
1	Wtware	100	Thin Client Operating System	Kovalev Andrey Alexandrovich	1960	2471/05-18 from 28.05.2018

2	MyOffice is Standard. A corporate user license for educational organizations, with no expiration date, with the right to receive updates for 1 year.	220	Office Application	LLC "NEW CLOUD TECHNOLOGIES"	283	without limitation, with the right to receive updates for 1 year.
3	LibreOffice		Office Application	The Document Foundation	Freely distributed software	
4	Windows 10 Education	700	Operating systems	Microsoft	Azure Dev Tools for Teaching Subscription	
5	Yandex. Browser		Browser	«Yandex»	3722	
6	Subscription to MS Office Pro for 170 PCs for FGBOU VO "PIMU" of the Ministry of Health of Russia	170	Office Application	Microsoft		23618/HN10030 LLC "Softline Trade" from 04.12.2020

10. List of changes to the working program (to be filled out by the template)

Federal State Budgetary Educational Institution of Higher Education
 "Privolzhsky Research Medical University"
 Ministry of Health of the Russian Federation
 (FSBEI HE "PRMU" of the Ministry of Health of Russia)

Department of eye diseases

CHANGE REGISTRATION SHEET

working program for the academic discipline

ophthalmology

Field of study / specialty / scientific specialty: **31.05.03 STOMATOLOGY**

–

(code, name)

Training profile: _____
 (name) - for master's degree programs

Mode of study: **FULL-TIME** _____
 full-time/mixed attendance mode/extramural

Position	Number and name of the program section	Contents of the changes made	Effective date of the changes	Contributor's signature
1				

Approved at the department meeting
 Protocol No. _____ of _____ 20__

Head of the Department

 department name, acad