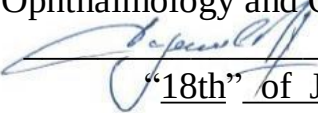


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ФИО: Стегний Кирилл Владимирович
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Дата подписания: 08.10.2026 12:11:58
Уникальный программный ключ:
d59234ba928aea5c04c54eb9013e367220bcb2a8

Federal State Budget Educational Institution
of Higher Education
Pacific State Medical University
of the Ministry of Health of the Russian Federation

APPROVED BY
Head of the Department of
Ophthalmology and Otorhinolaryngology
 / Fedyashev G.A./
“18th” of June 2026

SUBJECT GUIDE FOR TEACHERS AND STUDENTS FOR

B1.C.26 Ophthalmology

(Name of discipline)

Specialty

31.05.01 General Medicine (English-language program)

(code, name)

Degree

Specialist's degree

Profile

02 "Healthcare"

(in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system)

Mode of study

Full-time

Period of mastering the BEP

6 years

(nominal length of study)

Department

of Ophthalmology and
Otorhinolaryngology

Subject guide for teachers and students for **B1.C.26 Ophthalmology** is based on:

1) Federal State Educational Standard of Higher Education for the specialty approved by the Order No. 988 of Ministry of Science and Higher Education of the Russian Federation dated August 12, 2020.

2) Curriculum for the 31.05.01 General Medicine (English-language program), profile 02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system), approved by the Academic Council of FSBEI HE PSMU of the Ministry of Health of Russia, Report No. 1-7/25-26 dated March 27, 2026.

Subject guide for teachers and students for **B1.C.26 Ophthalmology** was developed by the writing team of the Department of Ophthalmology and Otorhinolaryngology of the FSBEI HE PSMU of the Ministry of Health of Russia, under the guidance of the head of the department, professor, Doctor of Medical Sciences Fedyashev G.A.

Developed by:

Head of the Department of Ophthalmology and Otorhinolaryngology (position held)	Doctor of Medical Sciences, Associate professor (academic degree, academic title)	Fedyashev G.A.. (full name)
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1. GENERAL PROVISIONS

Subject guide for **B1.C.26 Ophthalmology** is a set of recommendations and explanations that facilitate to optimal organization of mastering this discipline.

Regular analysis of lecture materials and work with end-of-the-text questions are necessary for better understanding of the material and systematization of knowledge of **B1.C.26 Ophthalmology**. Particular attention should be paid to emerging questions, confusing terms, and conflicts of points of view during the independent review of the lecture material. If necessary, a student should contact the teacher for advice. Lecture material streamlines students' thinking, while practical classes provide deeper insight into the material of the discipline.

Special attention should be paid to the content of the main provisions and conclusions, explanation of phenomena and facts, and clarification of the practical application of theoretic aspects of topic when preparing for a practical class. During this process students should aim to understand and remember the main provisions of the material under consideration, examples provided, as well as understand the illustrative material.

Collections of assessment tools are used to organize independent study of topics of **B1.C.26 Ophthalmology**.

Independent work of students is facilitated by the following:

1. availability and accessibility of the necessary educational and reference material;
2. a system of regular quality control of completed independent work;
3. availability of teacher's advice.

Subject guides for self-study are presented as literary sources. Subject guides for independent work of students include a list of library resources of the educational institution and other materials accessible to students.

Independent work is a type of in-person extracurricular work of teachers and students of **B1.C.26 Ophthalmology**. Control of independent work is conducted by the leading teacher. Evaluation of independent work results is taken into account when conducting interim examination of students throughout **B1.C.26 Ophthalmology** course.

Continuous assessment during **B1.C.26 Ophthalmology** course is implemented in order to check indicators of achieving competencies, to stimulate students' academic work, and improve methods of mastering new knowledge. Continuous assessment during **B1.C.26 Ophthalmology** course is conducted during the semester to assess all types and sections of the academic discipline that encompass the competencies developed by the discipline: classroom questioning, conducting discussions, working with tests, preparing slides presentations, writing library-research papers, conducting research. Continuous assessment of students' knowledge and results of their preparation for practical classes is conducted during every class session.

Interim assessment aims to determine the level of mastery of competency indicators. It is conducted in the pass/fail test format after the student has mastered all sections of **B1.C.26 Ophthalmology** and takes into account learning outcomes for all types of student work over the entire period of mastering **B1.C.26 Ophthalmology** course.

Time allotted for interim assessment is indicated in the schedule.

Assignments given during practical classes, as well as assignments aimed to prepare students for continuous and interim assessment, are included in the collection of assessment tools for **B1.C.26 Ophthalmology**. If necessary, students should contact the teacher for advice. It is necessary to thoroughly think over questions that need clarification before seeking teacher's advice.

2. SUBJECT GUIDES FOR LECTURE CLASSES

Table 1. Subject Guides for **B1.C.26 Ophthalmology** Lectures

Topic No.1 Main objectives of ophthalmology. Age-related anatomy and function of the visual system	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about the main objectives of ophthalmology and age-related anatomy and function of the visual system; 2. define anatomical structures and functions of the eye; 3. analyze methods of examining the structures and functions of the eye.	
Lecture plan, order of presentation of its sections: - Main objectives of ophthalmology and ways to achieve them - Age-related structure and functions of the anatomical parts of the eye - Main functions of the visual system	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.2 Refraction, accommodation. Types of refractive errors. Myopia	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about types of refraction, accommodation and their age-related characteristics; 2. define types of clinical refraction, astigmatism, accommodation spasm and presbyopia; 3. examine methods for determining clinical refraction, astigmatism, accommodation, presbyopia in practice and methods of treating myopia.	
Lecture plan, order of presentation of its sections: - Types of clinical refraction and their characteristics - Accommodation and its changes at different ages - Myopia as a disease is presented: classification, clinical manifestation, diagnosis, modern treatment methods.	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.3 Diseases of the accessory visual structures: conjunctivitis, blepharitis. Diseases of the orbit, sclera	

Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about inflammatory diseases of the accessory visual structures; 2. define key terms: conjunctivitis, blepharitis, scleritis, and orbital cellulitis; 3. examine diagnostic and treatment methods.	
Lecture plan, order of presentation of its sections: - Types of conjunctivitis, their clinical manifestation, of classification, diagnosis, and treatment - Blepharitis: clinical manifestation, classification, diagnosis, and treatment - Scleritis: forms, causes, and treatment. - Causes and clinical picture of orbital cellulitis, its complications, and treatment.	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.4 Diseases of the cornea: inflammation, corneal dystrophies, keratoconus	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about inflammation and dystrophies of the cornea; 2. define key terms: keratitis, corneal dystrophies, keratoconus; 3. analyse diagnostic and treatment methods, complications of inflammation and dystrophies of the cornea.	
Lecture plan, order of presentation of its sections: - Corneal dystrophies, keratoconus - Inflammatory diseases of the cornea (keratitis): classifications, clinical picture, diagnosis, and treatment.	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.5 Diseases of the uvea: uveitis. Importance of generalized diseases in the etiology of uveitis. Eye changes in patients with AIDS	
Duration of the lecture (in academic hours):	2

Purpose of the lecture: 1. tell students about inflammatory diseases of the uvea (uveitis) and eye changes in patients with AIDS; 2. define: infectious and non-infectious uveitis; 3. analyze diagnosis, classification, clinical manifestation, and treatment of anterior and posterior uveitis.	
Lecture plan, order of presentation of its sections: - Infectious and non-infectious uveitis - Treatment of infectious and non-infectious uveitis, anterior and posterior uveitis - Clinical manifestation, diagnosis, and treatment of eye changes in patients with AIDS	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.6 Eye changes in patients with generalized diseases	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about eye changes in patients with generalized diseases: hypertension, atherosclerosis, diabetes mellitus, Graves' disease, etc.; 2. define changes occurring in different parts of the eye in patients with generalized diseases – retinal edema, exudates and hemorrhages, exophthalmos, strabismus; 3. examine diagnostic methods, classification, clinical manifestation, and treatment of various eye changes in patients with generalized diseases.	
Lecture plan, order of presentation of its sections: - Eye changes in patients with hypertension, atherosclerosis, diabetes mellitus - Eye changes in patients with hematological diseases (anemia, leukemia) and Graves' disease	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.7 Pathology of the lens. Diagnosis, treatment, correction	
Duration of the lecture (in academic hours):	2

Purpose of the lecture: 1. tell students about lens opacities (cataracts), causes, and classifications; 2. define key terms: congenital and acquired cataracts (age-related, traumatic, complicated, etc.), aphakia, and pseudophakia; 3. examine diagnostic methods, clinical manifestation, treatment methods in patients with cataracts and aphakia.	
Lecture plan, order of presentation of its sections: - Cataracts, their classifications, and contributing factors - Clinical manifestations, diagnostic methods, and modern treatment of cataracts	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.8 Eye injuries. Injuries of the eye and accessory visual structures. Eye contusions: classification, first aid at the stages of triage. Burns and frostbite: first aid, treatment, and rehabilitation	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about wounds, contusions, and burns of the eye and accessory visual structures; 2. define and present modern classifications of wounds, contusions, and burns of the eyes and accessory visual structures; 3. examine diagnostic methods, clinical manifestation, emergency first aid, and possible complications as consequences of various eye injuries.	
Lecture plan, order of presentation of its sections: - Wounds and contusions of the eye and accessory visual structures - Chemical and thermal burns, frostbite. First aid for different types of eye injuries	
Recommended reading: 4. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 5. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 6. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.9 Glaucoma: acquired, congenital. Etiopathogenesis, clinical manifestation. Treatment stages. Active detection of patients with glaucoma	
Duration of the lecture (in academic hours):	2

Purpose of the lecture: 1. tell students about various types of glaucoma and their specifics; 2. define congenital, primary, secondary glaucoma; 3. examine diagnostic methods, classification, clinical manifestation, and modern treatment methods of different types of glaucoma.	
Lecture plan, order of presentation of its sections: - Congenital and secondary glaucoma – causes, clinical manifestation, diagnosis, and treatment. - Primary glaucoma: classification, clinical manifestation, diagnosis, modern treatment methods, aspects of follow-up care.	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.10 Ophthalmic oncology: diagnosis and modern treatment methods	
Duration of the lecture (in academic hours):	2
Purpose of the lecture: 1. tell students about benign and malignant lesions of the eye, eyelids, conjunctiva, and orbit; 2. define the clinical manifestation of benign, malignant, and metastatic tumors of the eye and accessory visual structures; 3. examine modern diagnostic and treatment methods of various tumors of the eye and accessory visual structures.	
Lecture plan, order of presentation of its sections: - Benign and malignant lesions of the eyelids, conjunctiva, lacrimal apparatus, and orbit, treatment methods - Benign and malignant lesions of the eyeball, treatment methods.	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	

3. SUBJECT GUIDES FOR PRACTICAL CLASSES

Table 2. Subject Guides for Practical **B1.C.26 Ophthalmology** Classes

Topic No.1 Main objectives of ophthalmology. Age-related anatomy of the visual system. Eye examination methods	
Duration of the practical class (in academic hours):	4

Purpose of the practical class: 1. consolidate acquired knowledge on the anatomy, examination methods, and functions of the visual system; 2. during the discussion, outline the eye's structure in clinical manifestation of diseases, examination methods, and visual functions; 3. thoroughly go over definitions and concepts of the organ of vision, its examination methods, and visual functions; 4. study patterns between the clinical picture and anatomical structures; 5. develop an understanding of which anatomical structures provide visual functions.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.2 Main function of the visual system: central and peripheral vision, color and light perception, binocular vision. Examination methods	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge on the main types of visual functions: central vision, peripheral vision, color perception, light perception, and binocular vision; 2. during the discussion, outline the main characteristics of visual functions; 3. thoroughly go over methods for determining visual functions; 4. study patterns of age-related dynamics of visual functions; 5. develop an understanding of the significance of visual functions in the professional aspect.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru	

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Topic No.3 Refraction, types of refraction. Myopia: examinations methods, classification, preventive measures, accommodation, presbyopia, astigmatism	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge on the types of clinical refraction, accommodation and its disorders, astigmatism, myopia as a disease, its classification, prevention measures, and modern treatment; 2. during the discussion, outline the main characteristics and age dynamics of clinical refraction; 3. thoroughly go over definitions and concepts of the clinical refraction issues; 4. study patterns of progression and stabilization of myopia; 5. develop the ability to solve refraction problems and write prescriptions for glasses.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
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Topic No.4 Diseases of the accessory visual structures: eyelids, conjunctiva, lacrimal organs, orbit. Aspects of progression	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge on the diseases of the accessory visual structures; 2. during the discussion, outline the main clinical symptoms of diseases of the accessory visual structures; 3. thoroughly go over definitions and concepts of the diseases of the accessory visual structures; 4. study patterns of the progression and diagnosis of diseases of the accessory visual structures; 5. develop treatment algorithms for the diseases.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	

Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
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Topic No.5 Diseases of the cornea: keratitis. Viral pathology of the eye. Clinical manifestation, treatment	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge on the diseases of the cornea; 2. during the discussion, outline the main manifestations of corneal syndrome; 3. thoroughly go over definitions and concepts of the corneal diseases (keratitis, dystrophies, keratectasias); 4. study patterns of progression and treatment of keratitis of various etiologies; 5. develop examination algorithms for the diseases of the cornea.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru 3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode http://www.studentlibrary.ru	
Topic No.6 Diseases of the uvea: uveitis. Classification, clinical manifestation, diagnosis, treatment	
Duration of the practical class (in academic hours):	4

Purpose of the practical class: 1. consolidate acquired knowledge on the diseases of the uvea (uveitis) considering anatomical features; 2. during the discussion, outline the main clinical symptoms of anterior and posterior uveitis; 3. thoroughly go over definitions and concepts of the anterior and posterior uveitis; 4. study patterns of progression and examination of infectious and non-infectious uveitis; 5. develop treatment algorithms for uveitis.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
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Topic No.7 Cataracts - congenital, acquired: classification, clinical picture, occupational hazards, treatment, diagnostic significance	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge on the types of cataracts, their diagnosis and treatment; 2. during the discussion, outline the main causes of cataracts; 3. thoroughly go over definitions, concepts, and classifications; 4. study patterns diagnostic examination methods; 5. develop an understanding of of aphakia, methods of correcting it, pseudophakia, and after-cataract.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
Recommended reading: 1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode http://studentlibrary.ru 2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode http://www.studentlibrary.ru	

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Topic No.8 Glaucoma: acquired, congenital. Etiopathogenesis, clinical manifestation. Treatment methods. Active detection of patients with glaucoma

Duration of the practical class (in academic hours):

4

Purpose of the practical class:

1. consolidate acquired knowledge on the etiopathogenesis, classification, clinical manifestation, methods of treatment of glaucoma;
2. during the discussion, outline the main issues regarding the features of the clinical manifestation of different forms of glaucoma;
3. thoroughly go over definitions and concepts of the of diagnostic procedures;
4. study patterns of etiopathogenesis and treatment for various forms of glaucoma;
5. develop treatment algorithms for various forms of glaucoma.

Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.

Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.

Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.

Recommended reading:

1. Ophthalmology: textbook Electronic resource, ed. by E.A. Egorov. - 2nd ed., rev. and suppl., M.: GEOTAR-Media, 2021 - 272 p. URL: Access mode <http://studentlibrary.ru>
2. Eye Diseases. Fundamentals of Ophthalmology: textbook Electronic resource, E.S. Avetisov; ed. by V.G. Kopaeva, Medicina, 2012.-552, [2] p.: ill. URL: Access mode <http://www.studentlibrary.ru>
3. Ophthalmology Electronic resource., ed. by Avetisov S.E., Egorov E.A., Moshetova L.K., Neroev V.V., Takhchidi Kh.P., M.: GEOTAR-Media, 2018 URL: Access mode <http://www.studentlibrary.ru>

Topic No.9 Eye injuries: contusions, wounds, burns. Classification, clinical manifestation, first aid, complications. Specialized medical aid in case of injury of the eye or accessory visual structures

Duration of the practical class (in academic hours):

4

Purpose of the practical class:

1. consolidate acquired knowledge on the injuries of the eye and accessory visual structures;
2. during the discussion, outline the main terms, classifications, features of the clinical manifestation;
3. thoroughly go over definitions and concepts of the diagnostic examination methods for different eye injuries;
4. study patterns of providing first medical aid for wounds, contusions, and burns of the eyes and accessory visual structures;
5. develop an understanding of complications of eye injuries and methods of rehabilitation.

Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.

Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
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Topic No.10 Eye changes in patients with generalized diseases: diabetes mellitus, hypertension, Graves' disease, rheumatic fever, eye changes in patients with AIDS. Retinal dystrophies	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge on the eye pathology in in patients with generalized diseases: diabetes mellitus, hypertension diabetes mellitus, atherosclerosis, Graves' disease, blood diseases, etc.; 2. during the discussion, outline the main issues regarding clinical manifestations in general diseases during discussion; 3. thoroughly go over definitions and concepts of the changes occurring in different parts of the eye in patients with generalized diseases – retinal edema, exudates, and hemorrhages; 4. study patterns in diagnostic methods, modern classifications, clinical picture, and treatment of various ocular changes in general diseases and retinal dystrophies; 5. develop algorithms for examination and identifying the need for treatment by an ophthalmologist together with related specialists for general diseases and retinal dystrophies.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
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Topic No.11 Lesion of the orbit and the eye. Early diagnosis, clinical manifestation, diagnosis, treatment principles	

Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge on the lesions of the eye, orbit, and accessory visual structures; 2. during the discussion, outline the main clinical symptoms; 3. thoroughly go over definitions and concepts of the; diagnostic examination for lesions of the eye, orbit, and accessory visual structures; 4. study patterns in diagnostic methods, modern classifications, clinical picture, and treatment of lesions of the orbit, eye, and accessory visual structures; 5. develop algorithms for examination and identifying the need for treatment by an ophthalmologist together with related specialists for lesions of the eyes, orbit, and accessory visual structures.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
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Topic No.12 Diseases of the optic nerve: optic neuritis, optic nerve atrophy, papilledema. Neuroophthalmology	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge on the diseases of the optic nerve: optic neuritis, optic nerve atrophy, papilledema, ischemic optic neuropathy; 2. during the discussion, outline the clinical manifestations in neuritis, optic nerve atrophy, and papilledema; 3. thoroughly go over etiology, classifications of neuritis, atrophy, and optic disc papilledema; 4. study patterns in diagnostic methods and treatment of various diseases of the optic nerve; 5. develop examination algorithms and an understanding of clinical manifestations (strabismus, anisocoria, visual field defects, etc.) of neuro-ophthalmological diseases.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
Methods of evaluation of acquired knowledge and skills: discussing reports, classroom questioning, tests.	
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Topic No.13 Strabismus: types, detection and treatment stages. Amblyopia: prevention. Organization of ophthalmological medical care, protection of eyesight of adult and children population. Medical examinations, aspects of temporary disability	
Duration of the practical class (in academic hours):	4
Purpose of the practical class: 1. consolidate acquired knowledge on the types of strabismus, types and degrees of amblyopia, aspects of vision protection in children with this pathology; 2. during the discussion, outline the main methods of diagnosis and treatment of this pathology; 3. thoroughly go over definitions and concepts of temporary and permanent disability; 4. study patterns of organization of ophthalmological care for adults and children; 5. develop an understanding of the criteria for determining disability groups of patients with visual impairments.	
Practical classes requirements: classrooms equipped with ophthalmological devices, models of the eyeball, and subject guides for the discipline.	
Independent work of the student: research activity, preparing reports on the lectures, and working with study materials.	
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4. GUIDELINES FOR CONTINUOUS AND INTERIM ASSESSMENT

Table 3. Guidelines for Conducting Continuous and Interim Assessment during **B1.C.26 Ophthalmology** Course

Type of assessment	Assessment format
Continuous assessment	- conducting and evaluating oral or written quizzes during lectures and practical classes; - assessment and evaluation of completion and results of assignments given during practical classes; - assess and evaluate completion and results of individual assignments and exam tasks given during practical classes.

Interim certification	is conducted in written format; it allows to assess the development of students' competencies correlating with types of professional activity.
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5 ASPECTS OF THE IMPLEMENTATION OF THE COURSE FOR STUDENTS WITH DISABILITIES AND SPECIAL NEEDS

5.1. Availability of accessible environment

For students with disabilities and special needs, if a written application is submitted, lectures and practical classes are carried out taking into account health limitations, individual capabilities and medical status (hereinafter referred to as individual characteristics) of the student. Compliance with the following general requirements is ensured: teaching aids for collective and individual use are provided, required technical assistance is provided by an assistant, buildings and premises where lectures and practical classes are taking place meet accessibility requirements, other arrangements lack of which makes it impossible or difficult to master the discipline are made.

5.2. Compliance with general requirements

When lectures and practical classes are carried out at the written application of the student, the following general requirements are met: lectures and practical classes for students with disabilities and special needs take place at the same location as for students who do not have disabilities, if this does not cause difficulties for students; an assistant (assistants), who provide(s) students with the necessary technical assistance taking into account individual characteristics of the student, is (are) provided; necessary teaching aids are provided, taking into account individual characteristics of the student.

5.3. Availability of the internal policies and procedures of FSBEI HE PSMU of the Ministry of Health of Russia to students with disabilities in a form accessible to them.

All internal policies and procedures of FSBEI HE PSMU of the Ministry of Health of Russia concerning the discipline are made available to students with disabilities in a form accessible to them.

5.4. Increase in the duration of interim assessment of students with disabilities and special needs in relation to the established duration

Format of the interim assessment of academic performance within the scope of the discipline for students with disabilities and special needs is selected taking into account individual characteristics (orally, by writing on paper, by typing on a computer, as a test, etc.). The duration of the interim assessment in relation to the established duration is increased at the written application of the student with disabilities. Time limit for the student's preparation for the test is increased by at least 0.5 hours

6. STAFFING REQUIREMENTS OF THE DISCIPLINE

Academic teaching personnel that ensure the implementation of the discipline education process meet the requirements of the Federal State Educational Standard of Higher Education for the **31.05.01 General Medicine** specialty; list of the aforementioned personnel is available on the website of the educational organization.

