

Ministry of Health of Ukraine
Poltava State Medical University

Department of Otorhinolaryngology and Ophthalmology

SYLLABUS

General medical training (ophthalmology, neurology, including neurostomatology, dermatology, venereology, psychiatry, narcology, medical psychology, physical rehabilitation, sports medicine, endocrinology)

(name of the discipline)

normative

(normative discipline/ selective)

| | |
|--------------------------------------|---|
| level of higher education | the second (master's) level of higher education |
| branch of knowledge | 22 "Health" |
| Specialty | 221 "Dentistry" |
| educational qualification | |
| professional qualification | Master of Dentistry |
| educational and professional program | daily |
| form of education | 4th year VII semester |

Module 1 Ophthalmology

DATA ON TEACHERS TEACHING THE COURSE

General medical training (ophthalmology, neurology, including neurostomatology, dermatology, venereology, psychiatry, narcology, medical psychology, physical rehabilitation, sports medicine, endocrinology) Module 1 Ophthalmology

| | |
|--|--|
| Surname, name, patronymic of the teacher (teachers), scientific degree, academic title | I.Bezkorovaina MD, Professor L.Voskresenska MD, Professor V. Ryadnova PhD, Associate Professor A Pera-Vasylchenko. PhD, Associate Professor I.Olefir I PhD assistant N.Bezega PhD assistant |
| Profile of teacher (s) | https://www.pdmu.edu.ua/fakultets/stomat/kafedry/otorunoftalm/ophthalmology/workers |
| Contact phone | (0532)656980 |
| E-mail: | ophthal@pdmu.edu.ua |
| Page of the department on the PSMU website | https://www.pdmu.edu.ua/fakultets/stomat/kafedry/otorunoftalm/ophthalmology |

MAIN CHARACTERISTICS OF THE COURSE

The scope of the discipline

Number of credits / hours 1,5 / 45 of them:

Lectures (hours) 6

Practical (seminars) (hours) 20

Independent work (h). 19

Type of control PMC

Course policy

An important condition for a successful educational process is the personal observance by each student of the University of the rules of conduct adopted in the Academy and in society. The student of the University, as a future doctor, must have a high level of culture and behavior, behave with dignity, tact, maintain endurance and self-control. The student must arrive on time to classes without delay, must be dressed in an appropriate medical uniform (white coat or surgical suit, change of shoes and medical cap). The student must not violate the schedule of the educational process, come to classes

with a synopsis and prepared on the topic of the lesson, not to allow non-compliance with the curriculum and individual curriculum without good reason. A student who has missed classes without a valid reason is obliged to apply to the dean's office for a rework permit within three days of attending classes. During the lesson, the student must not leave the classroom without the permission of the teacher; use mobile phones and other means of communication and information without the teacher's permission, engage in extraneous activities, distract other students and interfere with the teacher.

When organizing the educational process in PSMU students and teachers act in accordance with provisions:

For detailed Provisions it is possible on the link:

(<https://www.pdmu.edu.ua/n-process/departament-npr/normativni-dokumenty>)

Description of the discipline (abstract) General medical training (ophthalmology, neurology, including neurostomatology, dermatology, venereology, psychiatry, narcology, medical psychology, physical rehabilitation, sports medicine, endocrinology) Module 1 Ophthalmology

Ophthalmology is a branch of medical knowledge, a clinical discipline that studies the anatomy, physiology and pathology of the visual organ and adjacent areas. The importance and necessity of its teaching in the training of physicians is due to the fact that diseases of the visual organ are in one of the first places among human diseases. The organ of vision is connected by many anatomical and physiological mechanisms both with the body as a whole and with its individual organs and systems. Therefore, it is often involved in general diseases of the body or the first to respond to them with functional or morphological changes. In fact, all pathology of the visual organ (except for injuries, some exogenous inflammation of the eyelids, conjunctiva and cornea) is a manifestation of general or systemic diseases. Therefore, knowledge of ophthalmic symptoms in various common diseases is necessary for doctors of all specialties to diagnose, assess the stage, dynamics, determine the prognosis of the underlying disease.

The study of the discipline is carried out in the 4th year of study.

The subject of study of the discipline: is the study of diseases of the visual organ and its appendages, methods of examination, treatment and prevention of eye pathology. Prerequisites and postrequisites of the discipline (interdisciplinary links)

Prerequisites and postrequisites Module 1 Ophthalmology

The study of the module 1 Ophthalmology is based on:

- a) the knowledge gained from
 - medical and biological physics: interpretation of the general physical and biophysical laws that underlie human life, explanation of the basis of diagnostic and physiotherapeutic (therapeutic) methods used in medical equipment;
 - human anatomy: to determine the topographic and anatomical relationships of human organs and systems; interpret gender, age and individual features of the structure of the human body;

- histology, cytology, embryology: to interpret the microscopic structure of various human organs, at different ages, as well as in terms of physiological and reparative regeneration;
- physiology: to analyze the state of sensory processes in ensuring human life; explain the physiological basis of methods for studying the functions of the body and the organ of vision;
- microbiology, virology and immunology: to interpret the biological properties of pathogenic and non-pathogenic microorganisms, viruses and patterns of their interaction with the macroorganism, human population and the environment; to interpret the main mechanisms of formation of the immune response of the human body.

The study of the discipline "Ophthalmology" lays the foundations for the study of students:

- infectious diseases: to identify the main clinical symptoms that form the characteristic syndrome of the most common infectious diseases.
- internal medicine: to examine patients, make a preliminary diagnosis, differential diagnosis, determine methods of treatment of patients with rheumatism, rheumatoid arthritis, hypertension, blood diseases, endocrine pathology, etc.
- epidemiology: to interpret the causes and patterns of the epidemic process, the main regulations in the field of epidemiology.
- occupational diseases: to examine the patient, make a preliminary diagnosis and determine the tactics of management of patients with the most common occupational diseases.
- oncology: to determine the tactics of examination and management of patients with suspected malignancy.

It involves the integration of teaching with these disciplines and the formation of skills to apply knowledge of ophthalmology in the process of further study and in professional activities.

The purpose and objectives of the discipline:

the purpose of studying of the discipline is to master the ethical and deontological foundations of vision protection for people of all ages. Based on vision, etiology, pathogenesis of diseases, classifications, features of the clinical picture, students master the necessary knowledge and skills, actions, objectives, skills that meet the ultimate goals of the discipline in accordance with the OPP.

The main objectives of the discipline are to establish theoretical foundations of ophthalmology as a science (terminology, research methods, general clinical symptoms of major eye diseases, principles of diagnosis and treatment, disease prevention) and practice practical research skills, methods of emergency care.

Competences and learning outcomes, the formation of which is facilitated by the discipline "Ophthalmology" (relationship with the normative content of training of higher education, formulated in terms of learning outcomes in the draft Standard). According to the requirements of the draft Standard, the module 1. Ophthalmology provides students with the acquisition of competencies:

- **Integral:** The ability to solve complex problems and problems in the field of health care in the specialty "Medicine" in professional activities or in the learning process, which involves research or innovation and is characterized by uncertainty of conditions and requirements.

- general:

1. Ability to abstract thinking, analysis and synthesis; ability to learn and be modernly trained.
2. Knowledge and understanding of the subject area and understanding of the profession.
3. Ability to apply knowledge in practical situations.
4. Ability to communicate in the state language both orally and in writing. Ability to communicate in another language.
5. Ability to search, process and analyze information from various sources.
6. Ability to adapt and act in a new situation; ability to work autonomously.
7. Ability to identify, pose and solve problems.
8. Ability to choose a communication strategy.
9. Ability to work in a team.
10. Interpersonal skills.
11. Ability to act on the basis of ethical considerations (motives).
12. Safe activities skills.
13. Ability to evaluate and ensure the quality of work performed.
14. The desire to preserve the environment.
15. Ability to act socially responsible and civic conscious.
16. Skills in the use of information and communication technologies

- special:

1. Collection of medical information about the patient's condition.
2. Evaluation of laboratory and instrumental research results.
3. Diagnosis of emergencies.
4. Performing medical manipulations.
5. Defining tactics and providing emergency medical care.
6. Determining the tactics of ophthalmological patient with somatic pathology.
7. Assessment of the impact of the environment on the health of the population (individual, family, population).
8. Keeping medical records.
9. Processing of state, social and medical information.

Program learning outcomes, the formation of which is facilitated by the discipline, including module 1. Ophthalmology.

1 Identify the leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's anamnesis, data of the patient's examination, knowledge about the person, his organs and systems, to establish a probable nosological or syndromic preliminary clinical diagnosis of a dental disease (according to list 2).

2. Collect information about the general condition of the patient, assess the psychomotor and physical development of the patient, the condition of the maxillofacial area, based on the results of laboratory and instrumental studies to assess information about the diagnosis (list 5).

3. Assign and analyze additional (mandatory and optional) methods of examination (laboratory, radiological, functional and / or instrumental) according to list 5, patients

with diseases of organs and tissues of the oral cavity and maxillofacial region for differential diagnosis of diseases (for list 2).

4. To diagnose emergencies under any circumstances (at home, on the street, in a medical institution), in an emergency, martial law, lack of information and limited time (according to list 4).

5. To determine the tactics of managing a dental patient with somatic pathology (according to list 3) by making an informed decision according to existing algorithms and standard schemes.

6. To organize carrying out of medical and evacuation actions among the population, military men, in the conditions of an emergency situation, including martial law, during the detailed stages of medical evacuation, taking into account the existing system of medical and evacuation support.

7. Determine the tactics of emergency medical care, using the recommended algorithms, under any circumstances on the basis of a diagnosis of emergency in a limited time (according to list 4).

8. Analyze and evaluate government, social and medical information using standard approaches and computer information technology.

9. Assess the impact of the environment on the health of the population in a medical institution by standard methods.

10. Form goals and determine the structure of personal activities based on the results of the analysis of certain social and personal needs.

11. To be aware of and guided in their activities by civil rights, freedoms and responsibilities, to raise the general cultural level.

12. Adhere to the requirements of ethics, bioethics and deontology in their professional activities.

13. To organize the necessary level of individual safety (own and persons cared for) in case of occurrence of typical dangerous situations in an individual field of activity.

14. Perform medical manipulations on the basis of preliminary and / or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 6).

15. Perform manipulations of emergency medical care, using standard schemes, under any circumstances on the basis of a diagnosis of emergency (according to list 4) in a limited time (according to lists 6, 7).

Learning outcomes for the discipline:

upon completion of the study, students must

- know:

- general issues of organization of ophthalmological care;
- reasons for the development of pathological processes;
- features of clinical symptoms of the main diseases of the organ of vision;
- tactics of emergency care and modern principles of treatment of patients with various pathologies.

- be able to:

- make a preliminary diagnosis of common eye diseases and injuries;

- provide first aid;
- decide on the next medical care;
- to clarify the connection of the pathological process in the patient's body with the disease of vision, and to identify and provide medical proposals;

Thematic plan of the lectures

| № | Name of the topic | Number of hours |
|---------------------------------|---|-----------------|
| Module 1 "Ophthalmology" | | |
| 1 | <p>Diagnosis and emergency care, prevention of inflammation of the eyelids, lacrimal organs and orbit (barley, eyelid abscess, dacryocystitis, periostitis, phlegmon of the orbit). Diagnosis of inflammation of the conjunctiva and membranes of the eye ("red eye" - conjunctivitis, keratitis, iridocyclitis, uveitis, retinitis, endophthalmitis, panophthalmitis). Diagnosis and treatment. Prevention.</p> <ul style="list-style-type: none"> - Anatomical and physiological features of the structure, conjunctiva, cornea, vascular membrane. - Methods of examination of eyelids, lacrimal organs, orbits of the conjunctiva, cornea, vascular membrane. - Inflammatory diseases of the eyelids: barley, chalazion, blepharitis. Clinic, diagnosis, treatment. - Inflammatory diseases of the lacrimal organs: dacryocystitis, dacryadenitis. Methods of treatment in newborns and adults. - Periorbititis and phlegmon of the orbit: clinic, diagnosis, treatment. - Inflammatory diseases of the conjunctiva: conjunctivitis. Etiology, clinic, diagnosis, treatment. - Inflammatory diseases of the cornea: keratitis. Etiology, clinic, diagnosis, treatment. - Inflammatory diseases of the choroid: anterior and posterior uveitis, panophthalmitis. Etiology, clinic, diagnosis, treatment. - Endophthalmitis. Diagnosis, treatment, prevention. | 2 |
| 2 | <p>Gradual decrease in vision (1): Presbyopia. Cataract: congenital, acquired (traumatic, complicated, secondary, senile). Glaucoma. Diagnosis, treatment, prevention.</p> <ul style="list-style-type: none"> - Anatomical and physiological features of the structure of the lens, optic nerve, drainage system of the eye, retina. - Methods of research of the lens, optic nerve, drainage system of the eye, retina. - Presbyopia. Clinic. Correction. - Congenital and acquired cataracts. Etiology, clinic, diagnosis, treatment. | 2 |

| | | |
|---|--|---|
| | <ul style="list-style-type: none"> - Glaucoma: diagnosis, treatment, prevention. - Macular degeneration. Etiology, clinic, diagnosis, treatment. - Optic nerve atrophy. | |
| 3 | <p>Damage to the organ of vision and the additional apparatus of the eye. Emergency aid. Prevention, medical examination.</p> <ul style="list-style-type: none"> - Classification of injuries of the visual organ. - Mechanical injuries of the eye and its appendages. Clinic, diagnosis, treatment. - Emergency care for eye injuries. - Penetrating eye injuries, Clinic, diagnosis, treatment. - Emergency care for eye injuries. - Burns. Classification, clinic, diagnosis, treatment. - Emergency care for burns of the visual organ. - Prevention of eye injuries. | 2 |
| | Total | 6 |

Thematic plan of practical classes (by modules and content modules)

| Content of module 1. Anatomical and functional features of the visual organ. | | |
|--|--|-----------------|
| № | Topic | Number of hours |
| 1 | <p>Anatomical and topographic features of the organ of vision. Functions of the organ of vision.</p> <ol style="list-style-type: none"> 1. Anatomy of the retina and visual pathways. 2. Study of normal visual acuity. 3. Methods of studying central vision. 4. Theories of color vision. 5. Methods of determining color vision, types of color perception disorders. 6. The concept of visual field and types of peripheral visual impairment 7. Methods of determining the field of view, normal boundaries for white and chromatic colors. 8. The concept of light perception, the theory of light perception. 9. Definitions and types of adaptation. 10. Methods for determining dark adaptation, types of disorders and their treatment. | 2 |
| 2 | <p>Refraction and accommodation</p> <ol style="list-style-type: none"> 1. The concept of refraction. Physical refraction. 2. Units of measurement of power of optical lenses. 3. Characteristics of different types of clinical refraction. 4. The course of rays in the emetropic eye. | 2 |

| | | |
|---|--|---|
| | <p>5. The course of rays in the myopic eye, the principles of correction.</p> <p>6. The course of rays in the hyperopic eye, principles correction.</p> <p>7. Methods for determining refraction (subjective and objective).</p> <p>8. Astigmatism, principles of correction.</p> <p>9. The concept of anisometropia, principles of correction.</p> | |
| Content of module 2. Inflammatory and dystrophic diseases of the visual organ. | | |
| 3 | <p>Diseases of the eyelids, orbit, lacrimal organs, conjunctiva.</p> <p>1. Anatomical and physiological features of the structure of the eyelids, orbit, lacrimal apparatus, conjunctiva.</p> <p>2. Methods of examination of eyelids (simple inversion, examination of the edge of the eyelids), orbit, lacrimal apparatus, conjunctiva</p> <p>3. Inflammatory diseases of the eyelids: barley, cholecystitis, blepharitis. Methods of treatment.</p> <p>4. Methods of research of diseases of an orbit.</p> <p>5. Clinic, diagnosis and principles of treatment of inflammatory diseases of the orbit.</p> <p>6. Methods of research of the lacrimal apparatus, color tests.</p> <p>7. Clinic, diagnosis and treatment of acute and chronic dacryocystitis.</p> <p>8. Features of treatment of dacryocystitis of newborns.</p> <p>9. Dacryoadenitis: clinic, diagnosis, treatment.</p> <p>10. Methods of conjunctival examination.</p> <p>11. Describe how to take a swab from the conjunctival cavity.</p> <p>12. Subjective symptoms of conjunctivitis.</p> <p>13. Objective symptoms of bacterial, viral, allergic conjunctivitis.</p> | 2 |
| 4 | <p>“Red eye” syndrome (conjunctivitis, keratitis, uveitis)</p> <p>1. Anatomical and physiological features of the structure of the conjunctiva of the cornea, sclera, choroid.</p> <p>2. Methods of research of the anterior segment of the eye.</p> <p>3. Describe the corneal syndrome</p> <p>4. Conjunctivitis: etiology, pathogenesis, classification, clinical treatment.</p> <p>5. Keratitis: etiology, pathogenesis, classification, clinical treatment</p> <p>6. Uveitis: etiology, pathogenesis, classification, clinical treatment</p> | 2 |

| | | |
|---|---|---|
| | 7. Scleritis: etiology, pathogenesis, classification, clinical treatment | |
| 5 | Diseases of the lens. 1. Anatomical and physiological features of the lens. 2. Participation of the lens in accommodation. 3. Methods of research of the lens and vitreous. 4. Classification of lens diseases. 5. Classification of cataracts. Stages of development of age-related cataracts. 6. The main clinical symptoms and treatment of age-related cataracts. 7. Aphakia: signs, methods of correction. 8. Congenital pathology of the lens. Tactics of an ophthalmologist with congenital cataracts. 9. Pathology of the vitreous. 10. Hemophthalmos: clinic, diagnosis, treatment of nostik. Modern methods of treatment. | 2 |
| 6 | Diseases with simultaneous damage to the organ of vision and the maxillofacial system (reactive arthritis, Stevens-Johnson syndrome, Rossolimo-Melkersson-Rosenthal syndrome, Sjögren syndrome, Mikulicz disease, Behcet disease) 1. Pathogenesis, clinical manifestations and treatment of reactive arthritis. 2. Etiology, clinical manifestations of Stevens-Johnson syndrome treatment. 3. Etiology, clinical manifestations of treatment of Rossolimo-Melkersson-Rosenthal syndrome 4. Etiology, clinical manifestations of Sjögren's syndrome treatment 5. Etiology, clinical manifestations of treatment of Mikulich and Behcet's disease. | 2 |
| 7 | Retinal diseases. Emergencies in ophthalmology (acute obstruction of the central vein of the retina and its branches, embolism of the central retinal artery, retinal detachment, phlegmon of the orbit). Curation. 1. Anatomical and physiological features of the retina. 2. Methods of retinal examination. 3. Classification of retinal diseases. 4. Acute obstruction of the central vein and retinal artery. Clinic, diagnosis, treatment. 5. Retinal detachment. Etiology, pathogenesis, treatment. 6. Retinal pigment dystrophy: causes, clinical signs, diagnosis, treatment. 7. Phlegmon of the orbit: clinic, diagnosis, treatment | 2 |
| 8 | Glaucoma, optic nerve disease. | 2 |

| | | |
|--|---|---|
| | <ol style="list-style-type: none"> 1. Anatomical and physiological features of the structure of the optic nerve, the angle of the anterior chamber of the eye. 2. Methods of optic nerve research. 3. Classification of diseases of the optic nerve. 4. Clinic of optic neuritis. 5. Optic nerve atrophy: classification, etiology, pathogenesis, clinical signs, treatment tactics. 6. Etiology, pathogenesis, ophthalmoscopic picture of congestive optic disc, importance in the diagnosis of diseases of the central nervous system. 7. The mechanism of regulation of IOP. 3. Research methods IOP. 5. Classification of glaucoma. 6. Pathogenesis, clinic and treatment of patients with congenital glaucoma. 7. Etiology of primary glaucoma. 8. Classification of primary glaucoma, its detailed characteristics. 9. The volume of necessary researches at patients with glaucoma. 10. Principles of conservative glaucoma therapy. 11. Clinic of acute glaucoma attack, emergency care. 12. Methods of surgical treatment of glaucoma patients. 13. Prevention of glaucoma 14. Secondary glaucoma. | |
| Content of module 3. Damage to the organ of vision. Emergencies in ophthalmology. | | |
| 9 | Damage to the organ of vision. Emergency aid. <ol style="list-style-type: none"> 1. Classification of injuries of the visual organ. 2. Clinical characteristics of contusions, treatment. 3. Classification of burns by severity. 4. First aid for burns of various origins. 5. Possibilities of conservative therapy and surgical treatment of burns and their consequences. 6. Classification and signs of penetrating injuries. 7. Clinical symptoms of injuries of the anterior segment of the eye. 8. Clinical symptoms of injuries of the posterior part of the eye. 9. The volume of examination of patients with penetrating injuries. Methods of localization of intraocular foreign bodies. 10. Principles of surgical treatment of wounds of the eyeball and eye appendages. 11. Complications of penetrating injuries. | 2 |

| | | |
|----|---|-----------|
| | 12. Sympatophthalmia: clinic, treatment, prevention measures. | |
| 10 | Protection of medical history Final modular control (control of theoretical training-1, control of practical training -1) | 2 |
| | Total | 20 |

Individual work

| № П / П | Topic | Number hours |
|------------------|--|-----------------|
| | | |
| 1. | Preparation for practical classes – theoretical preparation and development of practical skills, | 10 |
| 2 | Writing a medical history from the discipline "Ophthalmology" | 3 |
| 3 | Preparation for the final modular control | 6 |
| | Total | 19 |

Individual tasks.

1. Preparation of scientific student works and reports at scientific student conferences.
2. Participation in professional student competitions in the discipline.
3. Search for literature and conducting specialized research methods during the implementation of research student work.

The list of territorial questions for preparation of students for the final modular control.

Module 1 Ophthalmology

Content module 1

1. Visual analyzer, its significance in the cognition of the outside world.
2. History of ophthalmology development. Founders of domestic ophthalmology. Kyiv School of Ophthalmology.
3. Achievements of modern ophthalmology. Outstanding ophthalmologists: VP Filatov, .J. Merkulov, NO Puchkovskaya, ML Krasnov, MM Krasnov, SM Fedorov.
4. The concept of absolute, professional and social blindness. The main causes of blindness. Prevention of blindness in adults and children.
5. Blindness. Indicator of blindness. Training and employment of the blind (UTOS).
6. Formation of visual images. The role of the cerebral cortex in the act of vision. Theories of the act of sight.
7. The cornea. Its structure, blood supply, properties and functions.
8. Iris. Its structure, blood supply, properties and functions.
9. Eyelid (ciliary) body and choroid. Their structure, functions.
10. Muscles of the iris and ciliary body. Retina, its structure, functions of rods and cones.

11. Anatomy of the optic nerve, features of its structure and topography.
12. Crystal. Its functions, power, properties.
13. Blood supply to the eyeball.
14. The structure of the orbit and its contents..
15. Muscles of the eyelids. Their function and innervation.
16. The structure of the conjunctiva. Clinical signs of her normal condition.
17. Anatomy of the lacrimal organs. Methods of research of lacrimal ways.
18. External eye muscles. Their innervation and functions.
19. Twilight vision, its disorders, research methods.
20. Research of visual acuity. Visual acuity formula.
21. Peripheral vision and its research. Types of visual field disorders.
22. Color perception, its disturbances, research methods. Theories of color perception.
23. The main elements of the refractive system of the eye. The concept of diopter.
24. Types of clinical refraction. The role of the external environment in the formation of refraction.
25. Methods for determining refraction (objective and subjective).
26. Correction of ametropia in children.
27. Optical glasses and their applications. Contact lenses and their applications.
28. The volume and length of accommodation, its relationship with refraction. The farthest and closest point of view.
29. Accommodation and its age changes. Presbyopia.
30. Hyperopia, its clinic, diagnosis and correction.
31. Myopia, its clinic, causes of development.
32. Complications of myopia. Prevention of myopia progression.
33. Astigmatism, its types and correction.

Content module 2

35. Anomalies of eyelid position (entropion, ectropion, ptosis, lagophthalmos). Causes of their occurrence, clinic, methods of treatment.
36. Inflammatory diseases of the eyelids, barley, chalazion. Clinic, treatment.
37. Blepharitis, their clinic and treatment
38. Chronic dacryocystitis, its etiology, clinic, treatment.
39. Phlegmonous dacryocystitis, clinic and treatment.
40. Infant dacryocystitis, clinic and treatment.
41. Inflammatory diseases of the orbit (osteoperiostitis, phlegmon of the orbit, thrombosis of the cavernous sinus), clinic and treatment.
42. Methods of research of an anterior segment of the eye (focal, bifocal illumination, biomicroscopy).
43. Methods of research of optical environments of an eye.
44. Clinical course and methods of treatment of acute inflammation of the mucous membrane.
45. Clinical manifestations, etiology and methods of treatment of chronic conjunctivitis.
46. Gonoblenorrhoea in infants and adults. Prevention.
47. Adenoviral conjunctivitis. Their clinic and treatment.
48. Diphtheria of the eye. Her clinic, diagnosis, treatment.

49. Differential diagnosis of follicular lesions of the conjunctiva (trachoma, folliculitis, follicular conjunctivitis).
50. General principles of trachoma treatment.
51. Stages of trachoma, their clinic. Public and personal prevention of trachoma.
52. Complications of trachoma from the eyelids and cornea.
53. Classification of keratitis. General principles of their treatment.
54. Clinic and consequences of keratitis.
55. Creeping corneal ulcer. Its clinic and treatment.
56. Parenchymal keratitis. Its clinic and treatment.
57. Herpetic keratitis. Their diagnosis and treatment.
58. Serous iridocyclitis. Its clinical features, course, diagnosis, treatment.
59. Clinical signs of fibrinous iridocyclitis, etiology, pathogenesis, methods of treatment.
60. Complications and consequences of iridocyclitis.
61. Treatment of iridocyclitis. Pupil dilators. Indications and contraindications to their use.
62. Ways of outflow of intraocular fluid.
63. Dynamic classification of glaucoma.
64. Methods of early diagnosis of glaucoma. The value of dispensary examination of glaucoma patients.
65. Clinical forms of primary glaucoma, treatment.
66. Differential diagnosis of primary glaucoma and cataracts.
67. Acute attack of glaucoma, its clinic. Differential diagnosis with iridocyclitis.
68. Emergency care for acute glaucoma.
69. Secondary glaucoma, its causes, clinic, treatment.
70. Congenital glaucoma, its causes, clinic and treatment.
71. Anomalies of the lens position, diagnosis, complications, treatment.
72. Congenital cataract. Clinic, diagnosis, treatment methods.
73. Stages of senile cataract development. Diagnosis and treatment.
74. Diagnosis and conservative treatment of the initial stage of senile cataract.
75. Traumatic cataract. Features of its course, complications, surgical treatment.
76. Complicated cataract, its causes, clinic, treatment.
77. Secondary cataract, its clinic, causes, surgical treatment.
78. Aphakia, its signs, correction.

Content module 3

79. The main conditions of binocular vision. The importance of binocular vision in choosing a profession.
80. Allied strabismus, diagnostics, types.
81. Hidden strabismus, clinic, diagnosis.
82. Imaginary strabismus, clinic, diagnosis.
83. Principles of treatment of common strabismus.
84. Paralytic strabismus, its signs, differential diagnosis, methods of treatment.
85. Signs of penetrating injuries of the eyeball. Emergency care for them.
86. Penetrating eye injuries complicated by the presence of a foreign body. Methods of localization of a foreign body in the eye.

87. Principles of removal of intraocular foreign bodies at penetrating injuries of eyes.
88. Complications of penetrating injuries.
89. Sympathetic inflammation, its clinic, prophylaxis, treatment.
90. Contusions of the eyeball. Their manifestations and treatment.
91. Foreign bodies of the cornea and emergency care for them.
92. Electroophthalmia. Its clinical manifestations and first aid.
93. Endophthalmitis and panophthalmitis. Their clinic, causes, treatment.
94. Chemical eye burns, clinic, emergency care.
95. Thermal eye burns, clinic, emergency care.
96. Intraocular tumors, clinical course, treatment.
97. Military medical examination for eye diseases.
98. Detection of aggravation and simulation. Control methods for detecting visual acuity.
100. Establishment of a disability group due to visual impairment.
101. Ophthalmoscopy, its types.
102. Picture of a normal fundus.
103. Clinic of optic neuritis. Causes, differential diagnosis with congestive optic disc.
104. Ophthalmoscopic picture of congestive optic disc. Its significance in the diagnosis of brain tumors.
105. Changes of the fundus in hypertension
106. Changes in the fundus and diabetes mellitus.
107. Changes of the fundus in blood diseases.
108. Changes of the fundus in AIDS.
109. Retinal detachment, etiology, clinic, treatment.
110. Acute disorders of retinal circulation. Causes, clinic, treatment.

List of practical skills for the final modular control

1. Determine visual acuity by subjective method.
2. Determination of clinical refraction by subjective method.
3. Determination of clinical refraction by objective method.
4. Determine color perception using Rabkin's polychromatic tables
5. Determine the field of view by the control method and using an arc perimeter.
6. Determine the dark adaptation by the approximate method.
7. Kravkov's test - Purkinje.
8. Examination and inversion of the eyelids.
9. Research of a cornea by a method of lateral illumination.
10. Examine the sensitivity of the cornea.
11. Palpation to determine the sensitivity of the ciliary body.
12. Palpation to determine intraocular pressure. Maklakov's tonometer.
13. Investigation of the lens in transmitted light.
14. Determination of binocular vision. Sokolov's test.
15. Color tear and tubular test.
16. Biomicroscopy.

17. Schirmer's test.
- 18 Ophthalmoscopy.

Provide emergency care:

1. In acute iridocyclitis.
2. With acute conjunctivitis.
3. With a foreign body, the conjunctiva, cornea.
4. In an acute attack of glaucoma.
5. With penetrating wounded eye.
6. With chemical and thermal burns of the eye.

Form of final control of learning success –PMC

Current and final control system.

Control measures for assessing the educational activities of students include current and final control of knowledge, skills and abilities of students.

Control measures are based on the principles: compliance with standards of higher education; use of standardized and unified system diagnostics aimed at the application of knowledge; definiteness of criteria evaluation; objectivity and transparency of control technology.

Standardized generalized criteria for assessing students' knowledge:

| On a 4-point scale | Assessment in ECTS | Evaluation criteria |
|--------------------|--------------------|--|
| 5 (excellent) | A | The student shows special creative abilities, is able to acquire knowledge independently, without the help of the teacher finds and processes the necessary information, is able to use the acquired knowledge and skills for decision-making in unusual situations, convincingly argues answers, independently reveals own talents and inclinations, possesses not less than 90 % of knowledge from topics both during the survey and all types of control. |
| 4 (good) | B | The student is fluent in the studied amount of material, applies it in practice, freely solves exercises and problems in standardized situations, independently corrects errors, the number of which is insignificant, has no less than 85% of knowledge on the topic both during the survey and all types of control. |
| | C | The student is able to compare, summarize, systematize information under the guidance of a research and teaching staff, in general, independently apply it in practice, control their own activities; to correct mistakes, among which there are significant, to choose arguments to confirm opinions, has at least 75% knowledge of the topic both during the survey, and all types of control. |

| | | |
|------------------------|----|---|
| 3 (satisfactorily) | D | The student reproduces a significant part of theoretical material, shows knowledge and understanding of the basic provisions with the help of a researcher can analyze educational material, correct errors, among which there are a significant number of significant, has at least 65% knowledge of the topic, and during the survey, and of all kinds control. |
| | E | The applicant has educational material at a level higher than the initial, a significant part of it reproduces on reproductive level. has at least 60% knowledge of the topic both during the survey and all types of control. |
| 2 (not satisfactorily) | FX | The student has the material at the level of individual fragments that make up a small part of the material, has less than 60% knowledge of the topic as during the survey, and all types of control. |
| | F | The student has the material at the level of elementary recognition and reproduction of individual facts, elements, has less than 60% knowledge of the topic as during surveys, and all types of control. |

Input control.

Entrance control is carried out at the beginning of the study of a new discipline in order to determine the readiness of higher education students to master it. The control is carried out with the help of diagnostic tools in academic disciplines, usually test tasks.

Control results are analyzed at the departmental (interdepartmental) meetings, at the meetings of the councils of faculties (institutes) and the central methodical commission together with the teachers who conducted classes on the respective academic discipline, according to the graphological structure of the OP. According to the results of the entrance control, the organization of individual work with applicants for higher education, adjustment of working curricula, etc. is envisaged.

Current control.

Current control is carried out by scientific and pedagogical (pedagogical) workers during seminars and practical classes, industrial practice. The main purpose of current control is to provide feedback between the researcher and the graduate in the learning process and the formation of learning motivation of higher education. The information obtained during the current control is used both by the researcher and pedagogical worker - to adjust technologies, methods and teaching aids, and by applicants for higher education - to plan independent work.

Current control can be carried out in the form of oral interviews, solving situational problems, assessment of manipulations, written control, written or program computer testing in practical classes, assessment of performances of higher education students when discussing issues in seminars, discussions, etc. Forms of current control and evaluation criteria are defined in the work program specifically for each discipline. The current control is carried out by the scientific - pedagogical (pedagogical) worker systematically, during carrying out of practical and seminar employments, industrial

practice, performance of the concrete kind of works provided by the working curriculum on disciplines.

With the beginning of teaching the discipline scientific - pedagogical (pedagogical) worker must bring to the notice of higher education students the requirements for the current control of knowledge.

The teacher must assess the success of each student in each class on a four-point (traditional) scale, taking into account standardized, generalized criteria for assessing the knowledge of higher education.

Assessment of success is integrated (all types of work of the applicant are evaluated, both in preparation for the lesson and during the lesson) according to the criteria that are communicated to the applicants for higher education at the beginning of the study of the discipline.

The grade is given by the teacher in the "Journal of attendance and student performance" and synchronously in the "Electronic Journal of PSMU " (hereinafter EJ) at the end of the lesson or after checking individual tests (written work, solving typical or situational problems and tests), but not later than 2 calendar days after the lesson (in accordance with the "Regulations on the electronic journal of success").

Final control.

The components of the final control are: semester control and final certification of applicants for higher education, which is regulated by the "Regulations on the State certification of applicants for higher education of educational and qualification level specialist in the field of training

"Medicine" in the specialty 7.12010005 "Dentistry" of the Poltava State Medical University ".

Final modular control (PMC) - a form of final control, which consists in assessing the mastering of higher education educational material in a particular discipline (or part thereof) on the basis of current control and individual tasks performed in the last lesson. Semester PMC is planned in the absence of an exam or test.

Regulations for PMC.

PMC is carried out upon completion of the study of the program material of the module in the discipline and is held at the last lesson of the module.

Applicants for higher education who have scored the required minimum number of points during the current control (average grade point average 3.0 and above), do not have missed passes of lectures and practical classes, have mastered the topics for independent work within the module and met all requirements in the academic discipline, which are provided by the working curriculum in the discipline (protection of medical history, positive assessments of the content modules, received permission to compile PMC during the test control).

For PMC the hours provided in the working curriculum are used. PMC is accepted by scientific and pedagogical workers appointed by the head of the department.

In order to objectively impartial assessment of knowledge of higher education students are involved in the reception of PMC research and teaching staff, departments that have not conducted practical classes in these academic groups in this category of students.

The PMC score is evaluated in points and is not converted into a traditional 4-point score. The maximum number of PMC points is 80 points. The minimum number of PMC points at which the control is considered completed is 50 points. The maximum number of points per module is 200 points (of which up to 120 points for current performance).

The questions (test tasks, situational tasks) that are submitted to the PMC are formulated in such a way that the reference answer of the higher education applicant to each lasts approximately 3-5 minutes. The questions cover the most important sections of the working curriculum, which are sufficiently covered in the literature sources recommended as the main (basic) in the study of the discipline.

Examination tickets for PMC are formed on the issues, which are approved at the meeting of the department. The total number of questions (tasks, situational tasks) in each ticket should not exceed three. The PMC must be asked questions, which are determined for self-study within the module.

In case of violation of the rules of academic integrity by the applicant of higher education (p.2.2.5. Of the Rules of Procedure), the results of the assessment obtained during the preparation of the PMC student is graded "unsatisfactory".

Applicants for higher education who, during the study of the module from which the final control is conducted, had an average score of the current grade from 4.50 to 5.0 are exempted from the PMC and automatically (by agreement) receive a final grade, respectively (to Annex 1), therefore, the presence of the applicant at the PMC is mandatory.

In case of disagreement with the assessment, the specified category of applicants for higher education is PMC according to the general rules.

The obtained points for the module are presented by the researcher in the "Statement of final module control" and the individual curriculum of the student.

Information on students who are not enrolled in PMC, with the exact reason for non-enrollment is also entered in the "Statement of final module control" and individual curricula of students. The reasons for non-enrollment may be the following:

- a) the applicant for higher education has unfulfilled absences from classes and (or) lectures, industrial practice. Mark "n / v" (failed) in the column "points for PMC";
- b) the applicant of higher education attended all classes (practical, seminar, lecture), but did not score the minimum number of points for the current educational activity and is not allowed to PMC. Mark "n / a" (not allowed) in the column "points for PMC";
- c) the higher education student attended all classes, scored points for current educational activities and was admitted to the PMC, but did not appear at the PMC. The mark "n / z" (did not appear) in the column "points for PMC".

The applicant for higher education has the right to compile and re-compile two PMC. In exceptional cases, additional reorganization of the PMC may be carried out with the personal permission of the rector or the first vice-rector for scientific and pedagogical work.

PMC rearrangement regulations.

Permission to rearrange PMC is issued by the dean of the faculty, director of the institute (or his deputy) in the form of "Personal statement of rearrangement of final control" which the student receives in the dean's office under personal signature upon presentation of individual curriculum and (if necessary) information from the department. debt elimination (absence of "nb", average grade point average of 3.0 and more). In the case of organized reorganization of the PMC by a group of applicants for higher education, the general statement is used.

The personal statement of re-assembly of the final modular control (general statement) is filled in by the head of the department or his authorized person in two copies, one of which remains at the department, the other is returned to the dean's office by the head of the department (responsible teacher).

Applicants for higher education have the right to retake PMC, until the end of the study of the discipline

If the applicant for higher education has not passed the PMC, in the discipline, except for the semester control in the form of an examination, he may not be admitted to the semester control in the relevant discipline.

An uncompiled PMC in one discipline is not a ground for not admitting a student of higher education to compile the final semester control in another discipline, except for admission to the final certification.

12. Scheme of accrual and distribution of points received by students

Unified table of correspondence of scores for current performance, scores for PMC, exam, and traditional four-point score

| Average score for the current progress (A) | Points for current success from the module (A*24) | Points for PMC with module (A*16) | Points for the module and / or exam (A*24+A*16) | ECTS category | By 4-point scale |
|--|---|-----------------------------------|---|-----------------|---------------------------------|
| 2 | 48 | 32 | 80 | F FX | 2 Not satisfactorily |
| 2,1 | 50 | 34 | 84 | | |
| 2,15 | 52 | 34 | 86 | | |
| 2,2 | 53 | 35 | 88 | | |
| 2,25 | 54 | 36 | 90 | | |
| 2,3 | 55 | 37 | 92 | | |
| 2,35 | 56 | 38 | 94 | | |
| 2,4 | 58 | 38 | 96 | | |
| 2,45 | 59 | 39 | 98 | | |
| 2,5 | 60 | 40 | 100 | | |
| 2,55 | 61 | 41 | 102 | | |
| 2,6 | 62 | 42 | 104 | | |
| 2,65 | 64 | 42 | 106 | | |
| 2,7 | 65 | 43 | 108 | | |
| 2,75 | 66 | 44 | 110 | | |
| 2,8 | 67 | 45 | 112 | | |
| 2,85 | 68 | 46 | 114 | | |

| | | | | | |
|------|-----|-----|-----|----------|----------------------------|
| 2,9 | 70 | 46 | 116 | | |
| 2,95 | 71 | 47 | 118 | | |
| 3 | 72 | 50* | 122 | E | 3 satisfactorily |
| 3,05 | 73 | 50* | 123 | | |
| 3,1 | 74 | 50 | 124 | | |
| 3,15 | 76 | 50 | 126 | | |
| 3,2 | 77 | 51 | 128 | | |
| 3,25 | 78 | 52 | 130 | D | |
| 3,3 | 79 | 53 | 132 | | |
| 3,35 | 80 | 54 | 134 | | |
| 3,4 | 82 | 54 | 136 | | |
| 3,45 | 83 | 55 | 138 | | |
| 3,5 | 84 | 56 | 140 | | |
| 3,55 | 85 | 57 | 142 | | |
| 3,6 | 86 | 58 | 144 | | |
| 3,65 | 88 | 58 | 146 | | |
| 3,7 | 89 | 59 | 148 | | |
| 3,75 | 90 | 60 | 150 | C | 4 good |
| 3,8 | 91 | 61 | 152 | | |
| 3,85 | 92 | 62 | 154 | | |
| 3,9 | 94 | 62 | 156 | | |
| 3,95 | 95 | 63 | 158 | | |
| 4 | 96 | 64 | 160 | | |
| 4,05 | 97 | 65 | 162 | | |
| 4,1 | 98 | 66 | 164 | | |
| 4,15 | 100 | 66 | 166 | | |
| 4,2 | 101 | 67 | 168 | | |
| 4,25 | 102 | 68 | 170 | B | |
| 4,3 | 103 | 69 | 172 | | |
| 4,35 | 104 | 70 | 174 | | |
| 4,4 | 106 | 70 | 176 | | |
| 4,45 | 107 | 71 | 178 | | |
| 4,5 | 108 | 72 | 180 | | |
| 4,55 | 109 | 73 | 182 | A | 5 excellent |
| 4,6 | 110 | 74 | 184 | | |
| 4,65 | 112 | 74 | 186 | | |
| 4,7 | 113 | 75 | 188 | | |
| 4,75 | 114 | 76 | 190 | | |
| 4,8 | 115 | 77 | 192 | | |
| 4,85 | 116 | 78 | 194 | | |
| 4,9 | 118 | 78 | 196 | | |
| 4,95 | 119 | 79 | 198 | | |
| 5 | 120 | 80 | 200 | | |

Teaching methods.

When studying the discipline "Ophthalmology" the following teaching methods are used:

- Verbal: lectures, explanations, story, conversation, instruction
- Visual: illustrations, demonstrations

- Practical: performing practical work and solving situational tasks to develop skills and abilities;
- Independent work of students on comprehension and assimilation of new material
- Use of control and educational computer programs in the discipline;
- Thematic discussions;
- Brainstorming;
- Analysis of specific situations (short method);
- Presentations

Control methods:

- Oral;
- Written;
- Test;
- Programmable

Methodical support

1. Working curriculum of the discipline;
2. Syllabus;
3. Plans of lectures, practical classes and independent work of students;
4. Methodical developments, theses, texts, multimedia presentations of lectures on discipline;
5. Methodical instructions for independent work of students during preparation for a practical lesson and in class.
6. Methodical instructions for independent work of students on studying of the subjects brought on independent working out. 8 clinical tasks and 2 practical tasks and evaluation criteria).
7. Methodical recommendations for teachers,
8. Test tasks for self-control in accordance with the topics of practical classes
9. Theoretical questions and practical tasks to control the assimilation of content modules;
10. Materials for the final module control (examination tickets, including 20 test tasks, 8 clinical tasks and 2 practical tasks and evaluation criteria).
11. Demonstration materials, instructions for the use of technical teaching aids (equipment for mastering theoretical material, educational films, videos).
10. Methodical recommendations for teachers for practical classes according to the thematic plan.

Recommended literature

Basic

(available in the PSMU library)

1. Ophthalmology: National textbook/ O.P. Vitovska P.A. Bezditko, I.M. Bezkorovayana et al.; edited by O.P. Vitovska. – Kyiv: AUS Medicine Publishing, 2017 - 648 c.

2.Ophthalmology: [text]: Manual for foreign students of higher medical educational institutions of the III-IV accreditation levels/ V.V. Ryadnova, I.M. Bezkorovayana, A.V. Pera-Vasylchenko, L.K. Voskresenska. - Poltava: «ASMI»,2018. – 218 s., il.,.

Auxiliary

- 1."Ophthalmology" textbook. Edited by GD Zhaboyedov, RL Skripnik, K.: "Medicine", 2011.- 378p.
2. Therapeutic ophthalmology. Handbook of Ophthalmology. Edited by G.D. Zhaboyedova, Kireev VV: "Health", 2013.- 343p.
3. Ophthalmology. I.M. Bezkorovayana, V.V. Ryadnova, L.K. Voskresenska, Dyvosvit, 2012. - 244 p.
4. Ophthalmology. I.M. Bezkorovayana, V.V. Ryadnova, L.K. Voskresenska, Poltava: «ASMI», 2017. - 215 p.

Information resources

www.umsa.edu.ua
www.booksmed.com/oftalmologiya/
medlink.ucoz.ru/dir/66
www.booksgid.com › Профессии
padabum.com › Медицина
knigosite.org/library/books/10569
www.litlib.net/bk/29194
meduniver.com/Medical/Book/95.html –иностр.

Developers: Associate Professor A.Pera-Vasylchenko
Associate Professor V Ryadnova

