

MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

Department of Ophthalmology

CONFIRMED by

Vice-rector for scientific and pedagogical work

Eduard BURIACHKIVSKYI

« 01 » 09 2023

WORKING PROGRAM IN THE DISCIPLINE

«OPHTHALMOLOGY»

Level of higher education: second (master's degree)

Field of knowledge: 22 «Health care»

Specialty: 221 «Stomatology»

Educational and professional program: Stomatology

2023 - 2024

The working program is compiled on the basis of the educational and professional program «Stomatology» for the training of specialists of the second (master's) level of higher education in the specialty 221 «Stomatology» of the field of knowledge 22 «Health care», approved by the Academic Council of ONMedU (protocol № 9 dated 23/06/2022).

Authors:

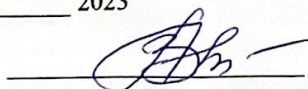
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The working program is approved at the meeting of the Department of Ophthalmology

Protocol № 1 dated "29" 08 2023

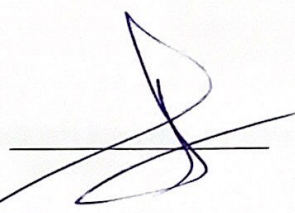
Head of Department



Liudmyla VENGER

Approved by the guarantor of

the educational and professional program

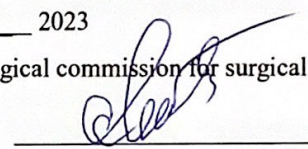


Anatoliy GULYUK

Approved by the subject-cycle methodological commission for surgical disciplines of ONMedU

Protocol № 1 dated "20" 08 2023

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Vasyl MISHCHENKO

Revised and approved at the department meeting _____

Protocol № ___ dated "___" _____ 20__ y.

Head of Department

(_____)

(signature)

(First Name Last Name)

Revised and approved at the department meeting _____

Protocol № ___ dated "___" _____ 20__ y.

Head of Department

(_____)

(signature)

(First Name Last Name)

1. Description of the academic discipline

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the academic discipline
Total number:	Field of knowledge 22 «Health care»	<i>Full-time education</i> <i>Compulsory discipline</i>
Credits of ECTS: 1		<i>A year of training 4</i>
Hours: 30	Specialty 221 «Stomatology»	<i>Semester VII-VIII</i>
		<i>Lectures (hours) 4</i>
Content modules: 1	Level of higher education second (master's degree)	<i>Seminars (hours) 0</i>
		<i>Practical classes (hours) 14</i>
		<i>Laboratories (hours) 0</i>
		<i>Independent work (hours) 12</i>
		<i>including individual tasks (0 hours)</i>
		<i>The form of the final control - credit</i>

2. The purpose and tasks of the educational discipline, competencies, program learning outcomes.

The purpose is to master the knowledge and to form the elements of the professional competencies and practical skills in the field of ophthalmology acquired during the study of previous disciplines.

The tasks of the discipline are the following:

1. Formation of systematized knowledge on the organization of ophthalmic care.
2. Formation of systematized knowledge on the examination of an ophthalmic patient, methods of diagnosis, treatment and prevention of the most common ophthalmic diseases.
3. Mastering the ability to determine the tactics of emergency ophthalmic care, diagnose traumatic injuries of the organ of vision and its appendages, and provide first aid.

The process of studying the discipline is aimed at forming elements of the following **competencies**:

– **general (GC)**:

GC2 – Knowledge and understanding of the subject area and understanding of professional activity

GC3 – Ability to apply knowledge in practical situations.

GC9 – Ability to identify, pose and solve problems.

GC13 – The ability to act socially responsibly and consciously.

– **special (SC)**:

SC1 – Ability to collect medical information about the patient and analyze clinical data.

SC2 – The ability to interpret the results of laboratory and instrumental research.

SC3 – Ability to diagnose: determine preliminary, clinical, final, accompanying diagnosis, emergency conditions.

SC7 – The ability to determine the management tactics of patients with diseases of the organs and tissues of the oral cavity and maxillofacial region with concomitant somatic diseases.

SC8 – Ability to perform medical and dental manipulations.

SC14 – Ability to maintain regulatory medical documentation.

SC16 – Processing of state, social and medical information.

Program learning outcomes (PLO):

PLO 2. Collect information about the patient's general condition, evaluate the patient's psychomotor and physical development, the condition of the maxillofacial organs, based on the results of laboratory and instrumental studies, evaluate information about the diagnosis

PLO 3. Assign and analyze additional (mandatory and optional) examination methods (laboratory, X-ray, functional and/or instrumental) according to list 5, of patients with diseases of organs and tissues of the oral cavity and maxillofacial region for differential diagnosis of diseases (according to the list 2).

PLO 4. Determine the final clinical diagnosis in compliance with the relevant ethical and legal norms, by making a reasoned decision and logical analysis of the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis under the control of the head physician in the conditions of a medical institution (according to list 2.1).

PLO 5. Determine a diagnosis of urgent conditions under any circumstances (at home, on the street, in a medical institution), in conditions of emergency, martial law, lack of information and limited time (according to list 4) of the PRN 10. Determine the tactics of managing a dental patient with somatic pathology (according to list 3) by making a reasoned decision according to existing algorithms and standard schemes

PLO 10. Determine the tactics of managing a dental patient with somatic pathology (according to list 3) by making a reasoned decision according to existing algorithms and standard schemes

PLO 13. Determine the tactics of providing emergency medical care, using the recommended algorithms, under any circumstances based on the diagnosis of an emergency condition in limited time (according to list 4).

PLO 21. Perform medical manipulations on the basis of a preliminary and/or final clinical diagnosis (according to lists 2, 2.1) for different strata of the population and in different conditions (according to list 6).

As a result of studying the discipline, the student has to:

– **Know:**

- methods and features of examination of a patient with ophthalmopathy;
- clinic, diagnosis and treatment of purulent-inflammatory diseases of the appendages of the organ of vision, conjunctiva and cornea;
- diagnosis of inflammatory diseases of the choroid of the eye, clinical manifestations, differential diagnosis, features of treatment;
- tactics for detecting glaucoma, clinical manifestations of various stages, their diagnosis, measures of conservative and surgical treatment.

– **Be able:**

- conduct anamnesis collection and objective examination of an ophthalmic patient;
- to diagnose various inflammatory and non-inflammatory processes of the organ of vision and its appendages;
- choose appropriate conservative tactics for different stages of development of inflammation of the organ of vision and its appendages;
- provide first aid for various traumatic injuries to the organ of sight and its appendages.

3. The content of the educational discipline

Topic 1. REFRACTION AND ACCOMMODATION OF THE EYE.

The concept of physical refraction of the eye and the age-related dynamics of its development. Objective and subjective methods of determining clinical refraction. Dependence of clinical refraction on the refractive power of optical media and the length of the eye axis. Characteristics of clinical refraction and its varieties: emmetropia, myopia, hypermetropia. Methods of examination. The concept of commensurate and incommensurate clinical refraction (emmetropia, ametropia, anisometropia). Age characteristic and specific weight of different types of refraction.

Emmetropia, its clinical characteristics, distribution, methods of determination.

Hypermetropia (farsightedness). Age dynamics, distribution. Features of optical correction of hypermetropia.

Myopia (short-sightedness). Characteristics, age dynamics and distribution. Congenital and progressive myopia. Changes in the membranes of the eye during progressive myopia. Pathogenesis, classification, role of unfavorable factors. Principles of medical and surgical treatment. Prevention.

Accommodation. Age-related changes in accommodation. Spasm and paralysis of accommodation, their causes. Presbyopia and its correction depending on the initial clinical refraction and age.

Topic 2. DISEASES OF THE EYELIDS, LACRIMAL ORGANS, CONJUNCTIVUS

Blepharitis, sty, chalazion, abscess, phlegmon of the eyelid. Ptosis, lagophthalmos. Congenital anomalies (coloboma of the eyelids, ankyloblepharon, eyelid twist, inversion of the eyelids, epicanthus, ptosis). Eyelid diseases caused by demodicosis (features of the clinical picture, diagnosis, treatment and prevention).

Dacryoadenitis. Etiology, clinic, diagnostic methods, course, complications. Principles of treatment. Sjögren's syndrome ("dry" eye syndrome during damage to the lacrimal and other exocrine glands). Pathogenesis, stages of the clinical course, consequences. Methods of diagnosis and therapy.

Dacryocystitis of newborns. Clinical signs, causes and time of appearance. Methods of diagnosis and treatment, possible complications.

Acute dacryocystitis (phlegmon of the lacrimal bladder). Clinic, course, consequences. Principles of treatment and prevention.

Conjunctivitis. Acute conjunctivitis, complaints, discharge, appearance of the conjunctiva, conjunctival injection of the eyeball and difference from pericorneal. Etiology. Methods of treatment.

Hemorrhage of newborns and adults. Its prevention and treatment. Effects. General and local treatment.

Viral conjunctivitis (herpesvirus, adenovirus). Features of diagnosis and treatment.

Injuries of the accessory apparatus of the organ of vision. Injuries of the conjunctiva.

Topic 3. DISEASES OF THE CORNEA. DIAGNOSIS, TREATMENT.

Keratitis of exogenous origin. Infectious keratitis of bacterial origin. Corneal ulcer. Creeping corneal ulcer. Clinic, course, consequences.

Keratitis of viral etiology. Adenovirus keratoconjunctivitis. Clinic. Course. Treatment is local and general.

Keratitis of endogenous origin. Infectious keratitis. Keratitis in congenital syphilis (parenchymal). Clinic. Effects. Causes of occurrence.

Tuberculous keratitis. Hematogenous tuberculous keratitis. Pathogenesis. Clinic. Treatment.

Neuroparalytic keratitis during trigeminal nerve damage. Herpetic keratitis. Clinic of various forms. Course. Effects. Treatment.

Fungal lesions of the cornea. Clinic, course, diagnostic features. Specific methods of treatment.

Avitaminosis keratitis. Damage to the cornea in vitamin deficiency A. Prexerosis. Xerosis of the cornea. Keratomalacia. Clinic. Course. Treatment. Prevention.

Corneal dystrophies. Causes, features of the clinic and treatment.

Traumatic damage to the cornea.

Topic 4. DISEASES OF THE VASCULAR MEMBRANE. DIAGNOSIS, TREATMENT.

Inflammation of the vascular tract (uveitis). Classification of uveitis according to course, localization, clinical and morphological picture, etiology, immunological status. The main clinical signs of uveitis (iritocyclitis, choroiditis, panuveitis). Treatment of anterior and posterior uveitis depending on the etiology and nature of the process. Effects. Prevention.

Anomalies of the development of the choroid (coloboma of the iris, coloboma of the ciliary body, coloboma of the choroid, aniridia, polycoria, chorioidermia, albinism, residual pupillary membrane).

Injuries of the vascular membrane. Hyphema.

Topic 5. PATHOLOGY OF THE LENS.

Congenital and acquired cataract (senile, secondary, complicated, traumatic), its development, pathogenesis, classification. Signs of cataract maturity. Methods of treatment. Indications for surgery.

Aphakia, methods of correction.

Congenital cataract (clinic, diagnosis, treatment). Anomalies of lens development.

Acquired pathology of the vitreous body (hemorrhage, destruction). Diagnostics, modern methods of treatment.

Topic 6. GLAUCOMA. INTRAOCULAR PRESSURE METHODS OF EXAMINATION.

Classification. Open-angle and closed-angle glaucoma (diagnosis, clinical course). Acute attack of glaucoma. Differential diagnosis with acute iridocyclitis. Treatment. Indications and terms of surgical treatment. Regimen of a glaucoma patient. Dispensary.

Congenital glaucoma (etiology, pathogenesis), clinical features and treatment.

Secondary glaucoma, clinical forms, principles of diagnosis and treatment.

Blindness due to glaucoma. Prevention, methods of early diagnosis of glaucoma.

Topic 7. SUDDEN DECREASE OF VISION. RETINA AND OPTIC NERVE DISEASES.

Acute obstruction of the central vein of the retina and its branches. Clinic, diagnosis, treatment. Emergency aid. Prognosis, consequences. Embolism of the central retinal artery, features of the clinical course, diagnosis, treatment, emergency care, consequences.

Detachment of the retina. Etiology, pathogenesis, features of the ophthalmological picture. Terms and methods of operative interventions. Use of modern methods of treatment. The role of photo- and laser coagulation in the prevention and treatment of retinal detachment. Effects.

Neoplasm of the retina. Features of the clinical course, ophthalmoscopic picture of retinoblastoma. Modern methods of diagnosis and treatment.

Inflammation of the optic nerve (neuritis). Papillitis and retrobulbar neuritis (etiology, clinic), diagnostic features. Emergency aid. Principles of treatment. Effects.

Congestive disc of the optic nerve. Causes of development, stages of development. Features of each stage. Differential diagnosis with optic neuritis. Features of treatment.

Credit.

4. The structure of the academic discipline

Names of topics	Number of hours					
	In total	including				
		lectures	seminars	practical	laboratory	IW
Content module 1.						
Topic 1. Refraction and accommodation of the eye.	3	-	-	2	-	1
Topic 2. Diseases of the eyelids, lacrimal organs, conjunctiva	4,5	0,5	-	2	-	2
Topic 3. Diseases of the cornea. Diagnosis, treatment.	4,5	0,5	-	2	-	2
Topic 4. Diseases of the choroid. Diagnosis, treatment.	5	1,0	-	2	-	2
Topic 5. Lens pathology.	3,5	0,5	-	2	-	1
Topic 6. Glaucoma. Methods of IOP examination.	4,5	0,5	-	2	-	2
Topic 7. Sudden decrease in vision. Diseases of the retina and optic nerve.	5	1,0	-	2	-	2
<i>Together according to the content module 1</i>	30	4	-	14	-	12
Exam	-	-	-	-	-	-
Total hours	30	4	-	14		12

5. Topics of lectures / seminars / practical / laboratory classes

5.1. Topics of lectures

№	Topic name	Number of hours
1	„Red eye” . (Diagnosis and emergency care, prevention of inflammation of the eyelids, lacrimal organs, conjunctiva (stye, eyelid abscess, dacryocystitis, conjunctivitis). Inflammatory diseases of the cornea and vascular tract (keratitis, uveitis, endophthalmitis, panophthalmitis). Diagnosis and treatment, prevention).	2
2	Gradual and sudden decrease in vision. (Glaucomas. Regulation mechanisms, intraocular pressure examination methods. Classification, clinic and treatment of glaucoma. Cataracts: congenital, acquired (traumatic, complicated, secondary, senile). Diseases of the retina and optic nerve. Neoplasms of the eyeball. Changes in the organ of vision in general diseases. Diagnosis, treatment, prevention).	2
	Total	4

5.2. Topics of seminar classes

Seminar classes are not provided.

5.3. Topics of practical classes

№	Topic name	Number of hours
1	Topic 1. Refraction and accommodation of the eye. Strabismus.	2
2	Topic 2. Diseases of the eyelids, lacrimal organs, conjunctiva	2
3	Topic 3. Diseases of the cornea. Diagnosis, treatment.	2
4	Topic 4. Diseases of the choroid. Diagnosis, treatment.	2
5	Topic 5. Lens pathology.	2
6	Topic 6. Glaucoma. Methods of IOP examination.	2
7	Topic 7. Sudden decrease in vision. Diseases of the retina and optic nerve.	2
	Credit	-
	Total	14

5.4. Topics of laboratory classes

Laboratory classes are not provided.

6. Independent work of a student of higher education

№	Title of the topic / types of tasks	Number of hours
1	Trachoma.	2
2	Individual tasks - preparation for practical classes - theoretical preparation and development of practical skills	
	1. Define clinical refraction (topic 1)	4
	2. Determine tear production (topic 2)	1
	3. Determine patency of tear ducts and interpret changes (topic 2)	1
	4. Determine ciliary sensitivity (topic 4)	2
	5. Determine intraocular pressure by palpation (topic 6)	2
	Total	12

7. Teaching methods

The following methods will be used during lectures and practical classes:

- *Verbal*: lectures (problematic, lectures with analysis of specific situations), explanation, discussion, discussion of clinical situations.

- *Visually*: illustrations (including multimedia presentations), demonstrations, the method of direct observation.

- *Practical*: solving clinical tasks; performance of individual tasks.

Practical training: conversation, solving clinical situational problems, practicing patient examination skills.

During practical classes, a large part of the time (at least 60%) should be devoted to working with patients. The rest of the time is for the analysis and joint discussion of the results of the higher education applicant's independent work with error correction.

Independent and individual work when studying an academic discipline, it is provided by methodical developments based on the independent work of a student of higher education, visual teaching aids (presentations, educational films), information resources of the department, algorithms for performing practical skills, algorithms for self- and mutual control of knowledge and skills, test tasks of the "Step-2" type to each class. Mastery of topics that are presented only for independent work is checked during practical classes.

8. Forms of control and evaluation methods (including criteria for evaluating learning outcomes)

Current control is carried out at each practical session by means of an oral survey or written control. After studying each section, the mastery of practical skills is monitored based on the control of theoretical knowledge, practical skills and abilities.

The main forms of current control are: oral survey, testing, assessment of the performance of practical skills, solution of situational clinical tasks, assessment of activity in class. The current educational activity of a student of higher education is evaluated in a practical session according to a traditional 4-point scale.

Evaluation of the current educational activity in a practical session:

1. Evaluation of theoretical knowledge on the subject of the lesson:
 - methods: survey, solving a situational clinical problem
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.
2. Evaluation of practical skills and manipulations on the subject of the lesson:
 - methods: assessment of the correctness of the performance of practical skills
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.
3. Evaluation of work with a patient on the subject of the lesson:
 - methods: assessment of: a) communication skills of communicating with the patient, b) the correctness of prescribing and evaluating laboratory and instrumental examinations, c) compliance with the differential diagnosis algorithm, d) substantiating the clinical diagnosis, e) drawing up a treatment plan;
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.

The grade for one practical lesson is the arithmetic average of all components and can only have an integer value (5, 4, 3, 2), which is rounded according to the statistical method.

The average grade for all activities of a student of higher education during the practical session becomes final.

Evaluation of the educational activity of all higher education students is not mandatory at every practical session. However, at least 50% of higher education applicants should be interviewed at the practical session.

At the end of the study of the discipline, the current success rate is calculated as the average score of all grades received by the student of higher education on a traditional scale, rounded to two decimal places.

Criteria for evaluating the student's work in a practical session

Оцінка	Criteria for evaluating
Excellent «5»	The student works systematically, shows versatile and in-depth knowledge of the program material during classes, is able to successfully perform the tasks provided for in the program, learns the content of the main and additional literature, is aware of the interrelationship of individual sections of the discipline, their importance for the future profession, shows creative abilities in understanding and the use of educational program material, shows the ability to independently update and replenish knowledge; level of competence - high (creative)
Good «4»	The student demonstrates full knowledge of the educational program material, successfully completes the tasks prescribed by the program, learns the basic literature recommended by the program, shows a sufficient level of knowledge in the discipline and is capable of their independent updating and renewal during further training and professional activity; level of competence - sufficient (constructive and variable)
Satisfactory «3»	The student demonstrates knowledge of the basic curriculum material to the

	extent necessary for further study and subsequent work in the profession, copes with the tasks provided for by the program, makes individual mistakes in answers, but possesses the necessary knowledge to overcome the mistakes made under the guidance of a scientific and pedagogical worker; level of competence — average (reproductive)
Unsatisfactory«2»	The student does not demonstrate sufficient knowledge of the basic curriculum material, makes fundamental mistakes in the performance of the tasks provided for by the program, cannot use the knowledge in further studies without the help of a teacher, has not managed to master the skills of independent work; the level of competence is low (receptive-productive).

The form of the final control is the credit.

Credit is given to the applicant who completed all tasks of the work program of the academic discipline, took an active part in practical classes, completed and defended an individual assignment and has an average current grade of at least 3.0 and has no academic debt.

Credit is carried out: at the last lesson. The credit score is the arithmetic mean of all components on a traditional four-point scale and has a value that is rounded using the statistical method with two decimal places after the decimal point.

Possibility and conditions of obtaining additional (bonus) points: not provided.

9. Distribution of points received by higher education applicants

The conversion of a traditional grade from a discipline to a 200-point grade is performed by the information and computing center of the university using the "Contingent" program according to the formula:

Conversion table of a traditional assessment into a multi-point scale

Traditional four-point scale	Multipoint 200-point scale
Excellent «5»	185-200
Good «4»	151-184
Satisfactory «3»	120-150
Unsatisfactory «2»	Less than 120

A multi-point scale (200-point scale) characterizes the actual success of each applicant in learning the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University.

According to the obtained points on a 200-point scale, the achievements of the applicants are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of students from the educational component who are studying in the same course of the same specialty, according to the points they received.

The ECTS scale establishes whether a student of higher education belongs to the group of better or worse among the reference group of fellow students (faculty, specialty).

An "A" grade on the ECTS scale cannot be equal to an "excellent" grade, and a "B" grade cannot be equal to a "good" grade, etc. Applicants of higher education who received grades "FX" and "F" ("2") are not included in the list of applicants who are ranked. Such students of higher education automatically receive an "E" score after retaking.

The grade "FX" is assigned to students of higher education who have scored the minimum number of points for the current educational activity, but who have not passed the final examination. A grade of "F" is assigned to students of higher education who attended all classroom classes in the discipline, but did not receive an average score (3.00) for the current educational activity and were not admitted to the final examination.

According to the ECTS rating scale, the achievements of students in the discipline who are studying in the same course of the same specialty are evaluated, according to the points they received, by ranking, namely:

Conversion of the traditional grade from the discipline and the sum of points on the ECTS scale

ECTS assessment	Statistical indicator
«A»	The best 10% of students
«B»	The next 25% of students
«C»	The next 30% of students
«D»	The next 25% of students
«E»	The last 10% of students

10. Methodical support

The teaching of the academic discipline in lectures is provided by methodical development of each lecture, published lecture texts, visual teaching aids for each lecture (presentations, educational films), information resource of the department.

Teaching the academic discipline **in practical classes** is provided by methodological developments of each practical lesson, visual teaching aids for each lesson (presentations, educational films), sets of diagnostic and therapeutic tools, information resources of the departments, topics of independent and individual tasks for each task, algorithms for performing practical skills and structured algorithms for controlling skills, test tasks of the "Step-2" type for each lesson.

Independent and individual work when studying an academic discipline, it is provided by methodological developments for independent work of students, visual teaching aids (presentations, educational films), information resources of departments, topics of independent and individual tasks for each task, algorithms for performing practical skills, algorithms for self- and mutual control of knowledge and skills, test tasks of the "Step-2" type for each lesson.

Carrying out **final differential control** is provided by methodological developments of lectures and practical classes, information resources of departments, test tasks of the "Step-2" type for admitting students to differentiated exam, standardized control questions, structured algorithms for control of practical skills.

11. List of recommended literature:

Basic:

1. Ophthalmology: textbook / O. P. Vitovska, P. A. Bezditko, I. M. Bezkorovayna et al.; edited by O. P. Vitovska. -2nd edition. - Kyiv: AUS Medicine Publishing, 2020. - 648 p.
2. Ophthalmology: textbook / O. P. Vitovska, P. A. Bezditko, I. M. Bezkorovayna et al.; edited by O. P. Vitovska. - Kyiv: AUS Medicine Publishing, 2017. - 648 p.
3. Atlas of Glaucoma. Second edition: textbook / Neil T. Choplin, Diane C. Lundy. - Informa healthcare, United Kingdom, 2007. -364 p. ISBN-10: 1841845183.
4. Common Eye Diseases and their Management: textbook / N. R. Galloway, W.M.K. Amoaku, P. H. Galloway and A. C. Browning; -Springer - Verlag London Limited, 2006. – 208 p. ISBN 1-85233-050-32.
5. Ophthalmology at a Glance: textbook / JANE OLVER, LORRAINE CASSIDY; - by Blackwell Science Ltd a Blackwell Publishing company, USA, 2005. -113 p. ISBN-10: 0-632-06473-0.

Additional:

1. Eye Diseases. Course of lectures: textbook / G. E. Venger, A. M. Soldatova, L. V. Venger; edited by V. M. Zaporozhan. - Odessa: Odessa Medical University, 2005. – 157p.
2. Ophthalmology: textbook. / Gerhard K. Lang, edited by J. Amann, O. Gareis, Gabriele E. Lang, Doris Recker, C.W. Spraul, P. Wagner. - Thieme Stuttgart. New York, 2000. - 604 p. ISBN 0-86577-936-8.
3. EYE Atlas. Online Atlas of Ophthalmology. / All rights Reserved, Oculisti Online. Copyright 2001. -408 p.
4. ABC of Eyes, Fourth Edition: textbook / P. T. Khaw, P. Shah, A. R. Elkington. - by BMJ Publishing Group Ltd, BMA House, Tavistock Square, London, 2005. - 97 p. ISBN 0 7279 1659

12. Electronic information resources

1. <https://info.odmu.edu.ua/chair/ophthalmology/>
2. <https://repo.odmu.edu.ua/xmlui/>
3. <http://library.gov.ua/>
4. <http://www.nbu.gov.ua/>
5. https://library.gov.ua/svitovi-e-resursy/dir_category/general/
6. <http://nmuofficial.com/zagalni-vidomosti/biblioteky/>
7. <https://guidelines.moz.gov.ua/documents>
8. www.ama-assn.org – American Medical Association
9. www.dec.gov.ua/mtd/home/
10. <http://bma.org.uk>
11. www.gmc-uk.org