

MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

Department of Ophthalmology

CONFIRMED by

Vice-rector for scientific and pedagogical work

Eduard BURIACHKIVSKYI



» 09 2023

WORKING PROGRAM OF THE ELECTIVE COMPONENT

«Changes in the organ of vision in general diseases »

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

Field of knowledge: 22 «Health care»

Specialty: 222 «Medicine»

Educational and professional program: Medicine

2023

The program was compiled by the staff of the Department of Ophthalmology of Odesa National Medical University: the Head of the department, Doctor of Medicine, Professor **Venger L.V.**, Doctor of Medicine, Professor and Doctor of Medicine **N.V. Konovalova**, Associate Professor **Yepisheva S.M.**

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

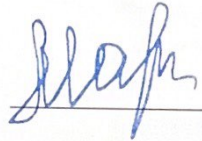
Protocol № 1 dated "29" 08 2023

Head of Department



Liudmyla VENGER

Approved by the guarantor of
the educational and professional program

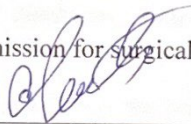


Valeriia MARICHEREDA

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

Protocol № 1 dated "30" 08 2023

Head of the subject-cycle methodological commission for surgical disciplines



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: 3	Specialty 222 «Medicine»	<i>A year of training 6</i>
Hours: 90	Level of higher education second (master's degree)	<i>Semester XI -XII</i>
Content modules: 1		<i>Lectures (hours) 0</i>
		<i>Seminars (hours) 0</i>
		<i>Practical classes (hours) 30</i>
		<i>Laboratories (hours) 0</i>
		<i>Independent work (hours) 60</i> <i>including individual tasks (0 hours)</i>
		<i>The form of the final control</i> <i>differential exam</i>

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

The purpose of teaching the academic discipline is the acquisition of knowledge and the formation of elements of professional competences in the field of ophthalmology by the student of higher education, namely, changes in the organ of vision in general diseases and improvement of skills and competences acquired during the study of previous disciplines.

The tasks of the discipline are the following:

1. Acquisition and deepening of a set of knowledge, abilities, skills and other competencies sufficient for solving complex tasks in ophthalmology;
2. Practice the skills and abilities of analyzing the results of ophthalmological research;
3. Acquisition of theoretical knowledge about ophthalmological symptoms and changes in the organ of vision in general diseases.
4. Acquisition of theoretical knowledge and practical skills regarding the peculiarities of observation, diagnosis and management of such patients.

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

Integral competencies: (IC): The ability to solve typical and complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.

– **General competencies: (GC):**

GC1 – Ability to abstract thinking, analysis and synthesis.

GC3 – Ability to apply knowledge in practical situations.

GC4 – Knowledge and understanding of the subject area and understanding of professional activity.

GC5 – Ability to adapt and act in a new situation.

GC6 – Ability to make reasonable decisions.

GC7 – Ability to work in a team.

GC8 – Ability to interpersonal interaction.

GC10 – Ability to use information and communication technologies

GC11 – Ability to search, process and analyze information from various sources.

GC12 – Determination and persistence in relation to assigned tasks and assumed responsibilities.

GC 13. Awareness of equal opportunities and gender issues

GC 15. Ability to preserve and increase moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technologies, to use various types and forms of motor activity for active recreation and leading a healthy lifestyle

GC 16. Ability to evaluate and ensure the quality of the work performed.

– **Special competencies: (SC):**

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

SC2 – Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.

SC3 – Ability to establish a preliminary and clinical diagnosis of the disease.

SC6 – Ability to determine the principles and nature of treatment and prevention of diseases.

SC11 – Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility.

SC 17 Ability to assess the impact of the environment, socioeconomic and biological determinants on the state of health of an individual, family, population

SC24 – Adherence to ethical principles when working with patients and laboratory animals.

Program learning outcomes (PLO):

PLO1 - Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.

PLO2 – Understanding and knowledge of basic and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.

PLO3 – Specialized conceptual knowledge that includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.

PLO5 - Collecting complaints, history of life and diseases, assessing the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluation of the information regarding the diagnosis (according to list 4), taking into account the age of the patient.

PLO 21. Searching for the necessary information in the professional literature and databases of other sources, analysing, evaluating and application of this information.

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

– **Know:**

- rules for determining the functions of peripheral and central vision;
- physiology of binocular vision, research methods, basics of diagnosis, treatment of strabismus (various types);
- diseases of the conjunctiva (clinic, diagnosis, differential diagnosis, treatment); clinic, diagnosis, differential diagnosis, examination, treatment of corneal diseases;
- clinic, diagnosis, differential diagnosis, examination, treatment of diseases of the anterior and posterior segments of the vascular tract;
- clinic, diagnosis, differential diagnosis, treatment of the main diseases of the retina;
- the main forms of optic nerve disease;
- clinic, methods of diagnosis and treatment of diseases of the orbit;
- professional eye diseases, complex measures for dispensation of patients, prevention and

medical examination.

– **Be able:**

- analyze the results of the patient's ophthalmological examination.
- to analyze the structural and functional relationships and sequence of stages of general pathological processes in ophthalmology.
- analyze and draw conclusions about the etiology and pathogenesis of functional disorders in eye diseases.
- to analyze the results of examination of patients with general eye pathology.
- determine etiological, pathogenetic factors and clinical manifestations, diagnose an emergency and provide emergency assistance to the victim in the conditions of natural and man-made disasters.
- perform medical manipulations necessary to provide emergency medical care.
- to provide emergency medical care for emergency conditions in ophthalmology.

3. The content of the educational discipline

Topic 1. Behcet's disease, Bechterew's (Marie-Strumpell) disease. Etiology, pathogenesis, prevalence, differential diagnosis, main diagnostic criteria, treatment.

Topic 2. Still's syndrome, Benye-Beck-Schauman disease. Etiology, pathogenesis, main diagnostic criteria, differential diagnosis, complications, treatment.

Topic 3. Changes in the organ of vision in some syndromes (Takayasu's disease, Grenblad-Strandberg syndrome, Recklinghausen's neuro-fibromatosis, Behr's, Vogt-Kayanaga-Harada's diseases). Etiology, pathogenesis, main diagnostic criteria, differential diagnosis, treatment.

Topic 4. Changes in the retina and optic nerve in hypertension and atherosclerosis. Etiology, pathogenesis, main diagnostic criteria, complications, treatment, prevention.

Topic 5. Changes in the organ of vision with heart defects, chronic heart failure and other vascular diseases. Etiology, pathogenesis, main diagnostic criteria, differential diagnosis, treatment, prevention.

Topic 6. Changes in the organ of vision in inflammatory and vascular diseases of the brain. Etiology, pathogenesis, main diagnostic criteria, differential diagnosis, treatment.

Topic 7. Pathology of the organ of vision in helminthiasis. Etiology, pathogenesis, main diagnostic criteria, differential diagnosis, treatment strategy.

Topic 8. Changes in the organ of vision in diseases of the thyroid gland. Etiology, pathogenesis, prevalence, main diagnostic criteria, treatment, prevention, dispensation.

Topic 9. Changes in the organ of vision in diabetes (blepharitis, barley, iridocyclitis, cataract, glaucoma, diabetic retinopathy). Etiology, pathogenesis, main diagnostic criteria, treatment, prevention, dispensation.

Topic 10. Changes in the organ of vision in kidney diseases. Etiology, pathogenesis, main diagnostic criteria, differential diagnosis, treatment, prevention.

Topic 11. Changes in the organ of vision in toxicoses of pregnancy. Pathogenesis, main diagnostic criteria, treatment, prevention, dispensation.

Topic 12. Pathology of the organ of vision in tuberculosis. Etiology, pathogenesis, main diagnostic criteria, treatment, prevention, dispensation.

Topic 13. Pathology of the organ of vision in TORCH-infections. Etiology, pathogenesis, main diagnostic criteria, differential diagnosis, treatment, prevention.

Topic 14. Pathology of the organ of vision in AIDS. Etiology, pathogenesis, main diagnostic criteria, treatment, dispensation.

Topic 15. Pathology of the organ of vision with COVID-19. Etiology, pathogenesis, main diagnostic criteria, differential diagnosis. treatment, prevention.

4. The structure of the academic discipline

Topic name	Number of hours		
	In total	including	
		practical	IW
Topic 1. Behcet's disease, Bechterew`s (Marie-Strumpell) disease.	6	2	4
Topic 2. Still's syndrome, Benye-Beck-Schauman disease.	6	4	4
Topic 3. Changes in the organ of vision in some syndromes (Takayasu's disease, Grenblad-Strandberg syndrome, Recklinghausen's neuro-fibromatosis, Behr's disease, Vogt-Koyanagi-Harada disease).	6	2	4
Topic 4. Changes in the retina and optic nerve in hypertension and atherosclerosis.	6	2	4
Topic 5. Changes in the organ of vision with heart defects, chronic heart failure and other vascular diseases.	6	2	4
Topic 6. Changes in the organ of vision in inflammatory and vascular diseases of the brain.	6	2	4
Topic 7. Pathology of the organ of vision in helminthiasis.	6	2	4
Topic 8. Changes in the organ of vision in diseases of the thyroid gland.	6	2	4
Topic 9. Changes in the organ of vision in diabetes (blepharitis, barley, iridocyclitis, cataract, glaucoma, diabetic retinopathy).	6	2	4
Topic 10. Changes in the organ of vision in kidney diseases.	6	4	4
Topic 11. Changes in the organ of vision in toxicoses of pregnancy.	6	2	4
Topic 12. Pathology of the organ of vision in tuberculosis.	6	2	4
Topic 13. Pathology of the organ of vision in TORCH-infections.	6	2	4
Topic 14. Pathology of the organ of vision in AIDS.			4

Topic 15. Pathology of the organ of vision with COVID-19.			4
IW	-	-	-
Total	90	30	60

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

5.1. Topics of lectures

Lectures are not provided.

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. Behcet's disease, Bechterew`s (Marie-Strumpell) disease.	2
2	Topic 2. Still's syndrome, Benye-Beck-Schauman disease.	2
3	Topic 3. Changes in the organ of vision in some syndromes (Takayasu's disease, Grenblad-Strandberg syndrome, Recklinghausen's neuro-fibromatosis, Behr's disease, Vogt-Koyanagi-Harada disease).	2
4	Topic 4. Changes in the retina and optic nerve in hypertension and atherosclerosis.	2
5	Topic 5. Changes in the organ of vision with heart defects, chronic heart failure and other vascular diseases.	2
6	Topic 6. Changes in the organ of vision in inflammatory and vascular diseases of the brain.	2
7	Topic 7. Pathology of the organ of vision in helminthiasis.	2
8	Topic 8. Changes in the organ of vision in diseases of the thyroid gland.	2
9	Topic 9. Changes in the organ of vision in diabetes (blepharitis, barley, iridocyclitis, cataract, glaucoma, diabetic retinopathy).	2
10	Topic 10. Changes in the organ of vision in kidney diseases.	2
11	Topic 11. Changes in the organ of vision in toxicoses of pregnancy.	2
12	Topic 12. Pathology of the organ of vision in tuberculosis.	2
13	Topic 13. Pathology of the organ of vision in TORCH-infections.	2
14	Topic 14. Pathology of the organ of vision in AIDS.	2
15	Topic 15. Pathology of the organ of vision with COVID-19.	2
	Total	30

5.4. Topics of laboratory classes

Laboratory classes are not provided.

6. Independent work of a student of higher education

№	Topic name	Number of hours
1	Topic 1. Behcet's disease, Bechterew's (Marie-Strumpell) disease.	4
2	Topic 2. Still's syndrome, Benye-Beck-Schauman disease.	4
3	Topic 3. Changes in the organ of vision in some syndromes (Takayasu's disease, Grenblad-Strandberg syndrome, Recklinghausen's neuro-fibromatosis, Behr's disease, Vogt-Koyanagi-Harada disease).	4
4	Topic 4. Changes in the retina and optic nerve in hypertension and atherosclerosis.	4
5	Topic 5. Changes in the organ of vision with heart defects, chronic heart failure and other vascular diseases.	4
6	Topic 6. Changes in the organ of vision in inflammatory and vascular diseases of the brain.	4
7	Topic 7. Pathology of the organ of vision in helminthiasis.	4
8	Topic 8. Changes in the organ of vision in diseases of the thyroid gland.	2
9	Topic 9. Changes in the organ of vision in diabetes (blepharitis, barley, iridocyclitis, cataract, glaucoma, diabetic retinopathy).	4
10	Topic 10. Changes in the organ of vision in kidney diseases.	4
11	Topic 11. Changes in the organ of vision in toxicoses of pregnancy.	4
12	Topic 12. Pathology of the organ of vision in tuberculosis.	4
13	Topic 13. Pathology of the organ of vision in TORCH-infections.	4
14	Topic 14. Pathology of the organ of vision in AIDS.	4
15	Topic 15. Pathology of the organ of vision with COVID-19.	4
	Total	60

7. Teaching methods

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

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

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

- *Practical*: solving clinical tasks; simulation training; practicing practical skills on dummies, mannequins; curation of patients; writing an educational history of disease;

performance of individual tasks.

Practical training: conversation, role-playing, solving clinical situational problems, practicing the skills of patient examination, practicing the skills of performing manipulations according to list 5, instruction and practicing skills on simulation dummies.

During practical classes, a large part of the time (at least 60%) should be devoted to working with patients, the results of laboratory tests, X-rays, etc. The rest of the time is for analysis and joint discussion of the results of students' independent work with error correction.

Independent and individual work when studying an academic discipline, it is provided by methodical developments for independent work of students, visual teaching aids (presentations, educational films), information resources of the department, the subject 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 class. Mastery of topics that are assigned only to independent work is checked during differential exam.

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 ongoing control are: oral survey, testing, solving 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: a) communication skills of communication with the patient, b) the correctness of prescribing and evaluating laboratory and instrumental studies, 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	Критерії оцінювання
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 balance.

Credit is awarded to a student who has completed all the tasks of the work program of the academic discipline, actively participated in practical classes and has an average current grade of at least 3.0 and has no academic debt.

Assessment 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 practical classes is ensured by methodical development of each practical class, visual teaching aids for each class (presentations, educational films), information resources of the departments, the subject of independent tasks for each task.

Independent and individual work in the study of an academic discipline is provided by methodological developments for the independent work of a student of higher education, visual teaching aids (presentations, educational films), information resources of departments.

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