

**MINISTRY OF HEALTH OF UKRAINE  
ODESSA NATIONAL MEDICAL UNIVERSITY**

**Faculty of medicine, international**

**Department of Ophthalmology**

**Syllabus of the academic discipline  
“ OPHTHALMOLOGY ”**

<b>Scope of the academic discipline</b>	Total number of hours per discipline: 90 hours, 3 credits. Semesters: VII-VIII. 4 year of education,
<b>Days, time, place of educational discipline</b>	According to the schedule of classes. Department of Ophthalmology. Odesa, str. Olhivska, 4 (Eye Microsurgery Center of the Multidisciplinary Medical Center of ONMedU, 1-2 floors, auditorium, classrooms); Odesa, 49/51 French Boulevard, laboratory building, 2nd floor, auditorium, classroom).
<b>Teacher(s)</b>	Head of Department, Doctor of Medicine, Prof. Venger Liudmyla Vilenivna Doctor of Medicine, Prof. Konovalova Natalya Valeriivna Associate Professor, Ph.D. Yepisheva Svitlana Mykolaivna Associate Professor, Ph.D. Ivanytska Olena Vyacheslavivna Assistant Tereshchenko Anastasia Anatoliivna Assistant Kovtun Oleksiy Valeriyovych Assistant Diachkova Zinaida Eduardivna
<b>Contact Information</b>	Phone help: Venger Liudmyla Vilenivna, head of the department (048) 723-42-98 Yepisheva Svitlana Mykolaivna, head teacher of the department 093-849-49-18 E-mail: <a href="mailto:eyeklinik@onmedu.edu.ua">eyeklinik@onmedu.edu.ua</a> ; <a href="mailto:eyeklinik@i.ua">eyeklinik@i.ua</a> Face-to-face consultations: from 14:00 to 17:00 every Thursday, from 9:00 to 12:00 every Saturday Online consultations: from 14:00 to 17:00 every Thursday, from 9:00 to 12:00 every Saturday. The link to the online consultation is provided to each group during classes separately.

### **COMMUNICATION**

Communication with applicants will be conducted in the classroom (face-to-face).

During distance learning, communication is carried out through the Microsoft Teams platform, as well as through email correspondence, through Viber, Telegram or WhatsApp messengers (through chats created in these messengers for each group, separately through the head of the group).

### **ABSTRACT OF THE EDUCATIONAL DISCIPLINE**

*Subject of discipline study* «Ophthalmology» - clinical anatomy, physiology, methods of examination of the organ of vision and its appendages, etiology, pathogenesis, diagnosis and treatment of the most common ophthalmic diseases, measures to organize a sanitary and epidemic regime in an

ophthalmic clinic; dressing material and methods of its application; clinic, diagnostics, first aid, principles of treatment for traumatic injuries; general issues of inflammatory diseases of the eye; basics of ophthalmic oncology; methodology of examination of an ophthalmological patient.

**Prerequisites:** to study the discipline, applicants need basic knowledge of medical and biological physics - physical optics, physical foundations of diagnostic and physiotherapeutic (treatment) methods used in medical equipment; from human anatomy - to determine the topographical-anatomical relationships of human organs and systems, to interpret gender, age and individual features of the structure of the human body; from microbiology, virology and immunology - to interpret the biological properties of pathogenic and non-pathogenic microorganisms, viruses and the laws of their interaction with the macroorganism, to interpret the main mechanisms of the formation of the immune response of the human body; from histology, cytology and embryology - to interpret the microscopic structure of various human organs in terms of the interrelationships of the tissues that are part of them at different age periods, as well as in the conditions of physiological and reparative regeneration; from physiology - to analyze the state of sensory processes in ensuring human vital activity, to explain the physiological bases of methods of researching the body's function; from internal diseases - to determine the tactics of managing the patient in the most common therapeutic diseases, make a diagnosis and provide emergency care in the main emergency conditions; from surgery - to provide emergency medical care for the most common surgical diseases, to interpret the results of laboratory and instrumental studies for the most common surgical diseases and their complications; from pathomorphology - to interpret the etiology, pathogenesis and morphological changes at different stages of the development of the disease, the structural basis of recovery, complications and consequences of diseases; from pathophysiology - to interpret the causes, mechanisms of development and manifestations of typical pathological processes; from radiology - to choose the optimal method of radiation examination to detect functional and morphological changes in the pathology of various organs and systems; from neurology - to determine the main symptoms and syndromes of damage to various parts of the nervous system; from otorhinolaryngology - make a preliminary diagnosis of the most common ENT diseases and injuries; from phthisiology - to plan the examination scheme of a tuberculosis patient, analyze the received data and determine treatment regimens for patients with various clinical forms of tuberculosis.

**Post-requisites:** mastering the educational material of the discipline "Ophthalmology" allows to form the ability to apply the acquired knowledge, abilities, skills and understanding in ophthalmology to solve typical tasks of a doctor in the field of health care in the relevant position, the scope of which is provided by the specified lists of syndromes and symptoms of diseases, physiological conditions and diseases that require special patient management tactics, emergency conditions, laboratory and instrumental research, medical manipulations.

**The purpose of discipline:** acquisition by the student of higher education of knowledge and formation of elements of professional competences in the field of ophthalmology and improvement of skills and competences acquired during the study of previous disciplines.

**Tasks of the discipline:**

1. Formation of systematized knowledge on the organization of ophthalmic care.
2. Formation of practical skills in the use of ophthalmic tools; mastering the skills of examination and ophthalmological examination of the patient.
3. Mastering the skills and methods of diagnosis, treatment and prevention of the most common ophthalmic diseases.
4. 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.

### ***Expected results***

*As a result of studying the academic discipline, the student of higher education should:*

– ***know:***

- basic principles of organization of ophthalmic care for the population of Ukraine;
- theoretical aspects of ophthalmic instrumentation and methods of its application;
- classification, clinical manifestations, consequences of ophthalmic diseases, methods of providing emergency specialized care;
- basics of analgesia in ophthalmology;
- 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;
- general issues of injuries to the organ of vision and its appendages
- clinic, diagnosis and treatment of purulent-inflammatory diseases of the appendages of the organ of vision, conjunctiva and cornea;
- methods and features of examination of a patient with ophthalmopathology;
- peculiarities of the structure of the medical chart of an inpatient.

– ***be able:***

- conduct anamnesis collection and objective examination of an ophthalmic patient;
- diagnose various inflammatory and non-inflammatory processes of the organ of vision and its appendages, carry out differential diagnosis between them;
- choose appropriate conservative tactics for different stages of development of inflammation of the organ of vision and its appendages;
- to diagnose various traumatic injuries of the organ of vision and its appendages;
- provide first aid for various traumatic injuries to the organ of sight and its appendages;
- choose an adequate method of anesthesia for carrying out this or that intervention;
- choose the tactics of postoperative management of an ophthalmic patient depending on the surgical intervention;
- draw up an inpatient card for a patient with ophthalmopathy;
- to comply with the requirements of ethics, bioethics and deontology in their professional activities.

## **DESCRIPTION OF THE EDUCATIONAL DISCIPLINE**

### ***Forms and methods of education***

The discipline will be taught in the form of lectures (6 hours), practical (54 hours), organization of independent work of the applicant (30 hours).

***Teaching methods:*** *verbal:* lectures (problematic, lectures with analysis of specific situations), story, explanation, conversation, discussion, discussion of problem situations, discussion of clinical situations; *visual:* 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.

***Content of the academic discipline*** «Ophthalmology».

Topic 1. History of ophthalmology. Anatomical and functional features of the organ of vision. Methods of examination of the organ of vision.

Development of algorithms for the study of the organ of vision.

Topic 2. Functions of the organ of vision (visual acuity, visual field).

Development of algorithms for the study of the organ of vision.

Topic 3. Refraction and accommodation of the eye. Strabismus.

Development of an algorithm for survey, examination and medical management of a patient with ametropia.

Topic 4. Diseases of eyelids, lacrimal organs, orbit.

Development of an algorithm for examination and medical management of a patient with pathology of the appendages of eye.

Topic 5. Diseases of the conjunctiva.

Development of an algorithm for examination and medical management of a patient with conjunctivitis.

Topic 6. Diseases of the cornea and sclera. Diagnosis, treatment.

Development of an algorithm for examination and medical management of a patient with corneal pathology.

Topic 7. Diseases of the choroid. Diagnosis, treatment.

Development of an algorithm for examination and medical management of a patient with pathology of the choroid of the eye.

Topic 8. Pathology of the lens and vitreous body. Features of ophthalmic surgery. Curation.

Development of an algorithm for examination and medical management of a patient with cataract. Development of an algorithm for communication with a patient, curation of a patient with ophthalmopathology, writing an ophthalmological history of disease.

Topic 9. Glaucoma. Methods of examination of intraocular pressure.

Development of an algorithm for examination and medical management of a glaucoma patient.

Topic 10. Damage to the organ of vision. Emergency aid.

Development of an algorithm for examination and provision of emergency care to a patient with an eye injury.

Topic 11. Gradual and sudden vision loss. Diseases of the retina and optic nerve. Changes in the organ of vision in general diseases. Protection of history of disease.

Development of an algorithm for examination and medical management of a patient with pathology of the retina or optic nerve. Justification of the patient's differential diagnosis for curation.

### **List of recommended literature:**

#### ***Basic:***

1. Ophthalmology: textbook / O. P. Vitovska, P. A. Bezditko, I. M. Bezkorovayna et al.; edited by O. P. Vitovska. -2<sup>nd</sup> 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

**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/](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](http://www.ama-assn.org) –American Medical Association
9. [www.dec.gov.ua/mtd/home/](http://www.dec.gov.ua/mtd/home/)
10. <http://bma.org.uk>
11. [www.gmc-uk.org](http://www.gmc-uk.org)

**EVALUATION**

During the classes, various *forms and methods* of current discipline control are used: oral survey, testing, evaluation of the performance of practical skills, evaluation of communication skills, solution of situational clinical tasks, evaluation of activity. The current educational activity of the applicant is evaluated in a practical session according to a traditional 4-point scale.

**Current evaluation criteria in practical training**

«5»	«4»	«3»	«2»
<b><i>Criteria for evaluating practical skills</i></b>			
The student of higher education independently performed this or that practical skill, clearly chose the necessary method of providing assistance in this or that clinical situation	The student of higher education independently performed this or that practical skill, but at the same time made two or three insignificant mistakes.	A student of higher education cannot independently choose an adequate method of assistance in this or that clinical situation, makes gross mistakes when performing practical skills	A student of higher education does not demonstrate knowledge of how to provide assistance in a particular clinical situation, cannot give any correct answer to a question.
<b><i>Criteria for evaluating theoretical knowledge</i></b>			
The student of higher education independently, clearly and consistently, with exhaustive completeness, using data from additional literature, answered all the questions.	The student of higher education maturely orients himself in the material, but when answering, he made two or three fundamentally unimportant mistakes.	A student of higher education knows the factual material in the full scope of the discipline program, but finds it difficult to independently and systematically present the answers, forcing the teacher to offer him leading questions.	The student of higher education does not demonstrate knowledge and is poorly oriented in the main theoretical material of the ophthalmology course, which is revealed by offering

			him additional questions.
<b>Criteria for evaluating the performance of test tasks</b>			
90-100 %	70-80 %	50-60 %	Less than 50 %
<b>Evaluation criteria for solving situational problems</b>			
3 from 3	2 from 3	1 from 3	none have been resolved
<b>Criteria for evaluating the activity of a student of higher education</b>			
Very active	Active	Less active	Passive
The student of higher education works actively during the entire practical session, is able to express his own attitude to alternative considerations on the given problem, demonstrates the ability to independently and reasonably present the material, analyze phenomena and facts, make independent generalizations and conclusions. Shows the ability to work in a group (is a leader), plan time, produce new ideas, evaluate the quality of the work performed, be critical and self-critical, evaluate his knowledge and the knowledge of others.	The student of higher education actively works during the practical session, the presentation of the material is logical, the coverage of issues is completed with conclusions, the student has demonstrated the ability to perform educational tasks. Shows the ability to work in a group, plan time, produce new ideas, evaluate the quality of the work performed, be critical and self-critical, evaluate his knowledge and the knowledge of others. But in order to manifest its qualities, it needs an external stimulus.	The student of higher education has generally mastered the essence of questions on this topic, tries to analyze questions, draw conclusions and solve problems. But he behaves passively in class, he responds only when called upon by the teacher. Does not show activity in the group, or only after the leader's remark.	A student of higher education does not show activity when working independently and as part of a group. Shows lack of interest and desire to work.

**The form of final control** is a differential assessment, which is evaluated on a 4-point scale.

The differential credit is given at the last lesson in the discipline based on the results of the final interview, with the obligatory performance by the student of higher education of all types of work provided for in the work curriculum (provided that he attends all classes, receives a positive assessment from the control of the acquisition of practical skills) and is evaluated for the current educational activity an average of not less than 3.00.

The means of diagnosing the assimilation of the material are control of the performance of practical skills (demonstration of the methodology and technique of performance of the proposed practical skills in the discipline), oral answers to 2 clinical tasks of the Step-2 type and theoretical questions.

The grade received for the answer to the differential assessment and the average current success score during the study of the discipline are used to calculate the arithmetic average, which makes up the overall grade in the discipline.

In the record book of a student of higher education, the teacher enters an assessment of the discipline according to the traditional and 200-point scales.

**The possibility and conditions of obtaining additional (bonus) points:** a higher education applicant can receive additional points for completing individual tasks:

- participation and report in the student scientific conference;
- participation in the subject Olympiad in ophthalmology, report at the student scientific circle;
- preparation of multimedia slides and design of tests;
- translations of scientific articles from foreign languages;
- abstract work on a certain topic.

The number of points awarded for different types of individual tasks depends on their volume and importance and is added to the sum of points scored by the student of higher education for the current educational activity for a certain section. Grades for individual assignments are awarded to the student of higher education only under the conditions of their successful completion and defense. The grade is added to the current grade.

## **INDEPENDENT WORK OF HIGHER EDUCATION ACQUIRES**

Independent work involves preparation for each practical session.

## **EDUCATIONAL DISCIPLINE POLICY**

### ***Deadlines and Rescheduling Policy***

- Absences of classes for non-respectable reasons will be worked out according to the schedule of the teacher on duty.
- Absences for valid reasons are worked out according to an individual schedule with the permission of the dean's office.

### ***Academic Integrity Policy***

Observance of academic integrity by applicants is mandatory, namely:

- ♦ independent performance of educational tasks, tasks of current and final control, provided for by the work program of this educational discipline;
- ♦ link to sources of information in the case of using ideas, development, statements, information;
- ♦ provision of reliable information about the results of one's own (scientific, creative) activity, used research methods and sources of information.

It is unacceptable in educational activities for the participants of the educational process:

- using family or work connections to obtain a positive or higher grade in any form of control of academic performance or academic performance;
- use during control measures of prohibited auxiliary materials or technical means (cheat sheets, notes, micro-masters, smartphones, tablets, etc.);
- going through procedures for monitoring the results of training by fake persons.

For violations of academic integrity, students may be held to such academic responsibility:

- decrease in evaluation results (control work, differentiated credit);
- re -passing the evaluation (control work, differentiated credit);
- appointment of additional control measures (additional individual tasks, control work, tests, etc.);

### ***Attendance and Tardiness Policy***

Attending lectures and practical classes is mandatory. If you are late for more than 15 minutes, the class is considered missed and you need to make up for it in the general manner.

Uniform: a medical gown that completely covers the outer clothing, or medical pajamas, a cap, a mask, and a change of footwear.

Equipment: notebook, pen.

Health: students with acute infectious diseases, including respiratory diseases, are not allowed.

***Use of mobile devices:***

Mobile devices can be applied by the teacher's permission if they are required to complete the task.

***Behavior in the audience***

The behavior of applicants and teachers in the classrooms should be working and calm, strictly comply with the rules established by the Regulation on academic integrity and ethics of academic relations at ONMedU, in accordance with the Code of academic ethics and relations of the university community of ONMedU, the Regulation on prevention and detection of academic plagiarism in scientific research and educational work of students of higher education, scientists and teachers of ONMedU.