

Odessa National Medical University
Medical faculty
Ophthalmology department

Syllabus course
“OPHTHALMOLOGY”

Volume	90 hours / 3 ECTS
Semester, year of study	Ophthalmology – 4-th year of study, 7-8 semester
Days, time, place	st. Olgievskaya, 4 (Ophthalmological Medical Center ONMedU), Department of Ophthalmology. Days and times of classes: in accordance with the schedule of the educational department
Teacher (s)	Ophthalmology: 1. Prof. Venger Lyudmila Vilenovna 2. Prof. Soldatova Alina Maksimovna 3. Prof. Kresyun Natalia Valentinovna 4. Assoc. Episheva Svetlana Nikolaevna 5. Assoc. Ivanitskaya Elena Vyacheslavovna 6. Assistant Pilkevich Tatiana Sergeevna 7. Assistant Vyazovsky Yuri Igorevich 8. Assistant Dyachkova Zinaida Eduardovna 9. Assistant Tereshchenko Anastasia Anatolyevna 10. Assistant Garber Igor Alfredovich 11. Assistant Kovtun Alexey Valerievich 12. Assistant Drozdin Vladimir Anatolyevich
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Consultation	In accordance with the schedule posted on the information stand of the department

COMMUNICATION

Communication with students will be carried out in the classroom.

During distance learning, communication is carried out through the Microsoft Teams platform, Zoom, as well as through e-mail correspondence, through Viber, Telegram, WhatsApp messengers.

ANNOTATION OF THE COURSE

The subject of study of the discipline "Ophthalmology" is clinical anatomy, physiology, methods of studying the organ of vision and its appendages, etiology,

pathogenesis, diagnosis and treatment of the most common ophthalmic diseases, measures for organizing a sanitary-epidemic regime in an ophthalmological clinic; dressing material and methods of its use; clinic, diagnostics, first aid, principles of treatment for traumatic injuries; general issues of inflammatory diseases of the organ of vision; basics of ophthalmic oncology; methodology of examination of an ophthalmic patient.

Prerequisites of the course: to study the course, students need to have basic knowledge of medical and biological physics - physical optics, physical foundations of diagnostic and physiotherapeutic (therapeutic) methods used in medical equipment; on human anatomy - to determine the topographic and anatomical relationships of human organs and systems, to interpret the sex, age and individual characteristics of the structure of the human body; in microbiology, virology and immunology - to interpret the biological properties of pathogenic and non-pathogenic microorganisms, viruses and the patterns of their interaction with a macroorganism, to interpret the main mechanisms of the formation of the immune response of the human body; in histology, cytology and embryology - to interpret the microscopic structure of various human organs in the aspect of interrelationships of tissues that make up their composition at different age periods, as well as in conditions of physiological and reparative regeneration; in physiology - to analyze the state of sensory processes in ensuring human life, explain the physiological foundations of methods for studying body functions; for internal medicine - to determine the tactics of managing a patient with the most common therapeutic diseases, to diagnose and provide emergency assistance in case of major emergency conditions; in surgery - to provide emergency medical care for the most common surgical diseases, interpret the results of laboratory and instrumental studies in the most common surgical diseases and their complications; in pathomorphology - to interpret the etiology, pathogenesis and morphological changes at different stages of the development of the disease, the structural foundations of recovery, complications and consequences of diseases; on pathophysiology - to interpret the causes, mechanisms of development and manifestations of typical pathological processes; in radiology - to choose the optimal method of radiation examination to detect functional and morphological changes in the pathology of various organs and systems; in neurology - to determine the main symptoms and syndromes of damage to various parts of the nervous system; in otorhinolaryngology - to make a preliminary diagnosis of the most common ENT diseases and injuries; on phthisiology - to plan a scheme for examining a patient with tuberculosis, analyze the data obtained and determine the treatment regimens for patients with various clinical forms of tuberculosis.

Postrequisites of the course: mastering the educational material of the discipline "Ophthalmology" allows you to form the ability to apply the knowledge, 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 for by certain lists of syndromes and symptoms of diseases, physiological conditions and diseases requiring

special tactics for managing patients, emergency conditions, laboratory and instrumental studies, medical manipulations.

The aim of the course is to master the system of knowledge about the organ of vision and its diseases, mastering the methods of diagnosis, treatment and prevention of the most common ophthalmic diseases; mastering systematized knowledge on the organization of ophthalmological care; mastering the skills of the study of visual functions and examination of the organ of vision and its appendages, the formation of practical skills for the examination of an ophthalmological patient and registration of its results in the medical record of an inpatient; master the skills of providing emergency ophthalmic care.

Discipline objectives:

- ♦ master the basic measures necessary to organize work in the ophthalmological department and ensure the prevention of the emergence and spread of nosocomial infection;
- ♦ acquisition of practical skills for examining the organ of vision and its appendages;
- ♦ acquiring practical skills in first aid for conditions such as trauma to the organ of vision and its appendages: contusions, wounds and burns
- ♦ acquisition of practical skills for biomicroscopic and ophthalmoscopic examination of the organ of vision;
- ♦ to master the basics of local and general anesthesia, to acquire the ability to choose the method of anesthesia depending on the patient's condition and the existing ophthalmopathology;
- ♦ acquisition of practical skills in the diagnosis and differential diagnosis of various ophthalmic infectious processes, acquisition of skills in choosing a treatment program and prophylaxis for infections of the organ of vision and its appendages;
- ♦ acquisition of skills and abilities for the examination of an ophthalmological patient and registration of the results in the appropriate medical documentation;
- ♦ formation of moral, ethical and deontological qualities in professional communication with a patient.

Expected results

As a result of studying the academic discipline, the student should know:

- ♦ modern concepts of domestic and foreign theoretical and practical ophthalmology;
- ♦ basic principles of organizing ophthalmological care for the population of Ukraine;
- ♦ the basics of organizing a rational regimen and treatment of an ophthalmic patient;
- ♦ common elements of care for patients with ophthalmopathology;
- ♦ theoretical aspects of ophthalmological instruments and methods of their application;

- ♦ theoretical aspects of prevention of the occurrence and spread of nosocomial ophthalmic infection;
- ♦ classification, clinical manifestations, consequences of ophthalmic diseases, methods of emergency specialized care;
- ♦ basics of pain relief in ophthalmology;
- ♦ diagnosis of inflammatory diseases of the choroid of the eye, clinical manifestations, differential diagnosis, treatment features;
- ♦ tactics for detecting glaucoma, clinical manifestations of various stages, their diagnosis, measures for conservative and surgical treatment;
- ♦ general issues of injuries of the organ of vision and its appendages
- ♦ general issues of ophthalmic-oncology;
- ♦ general issues of ophthalmic manifestations of HIV infection
- ♦ clinic, diagnosis and treatment of purulent-inflammatory diseases of the appendages of the organ of vision, conjunctiva and cornea
- ♦ method of examination of a patient, especially examination of a patient with ophthalmopathology;
- ♦ features of the structure of the inpatient's medical record.
- ♦ Students should be able to:
 - ♦ to organize appropriate sanitary and epidemic conditions for various premises of the ophthalmological department;
 - ♦ to collect anamnesis and objective examination of an ophthalmological patient;
 - ♦ possess the skills of examining an ophthalmic patient;
 - ♦ examine an ophthalmological patient and register its results in the medical record of an inpatient;
 - ♦ diagnose various traumatic injuries of the organ of vision and its appendages and provide first aid for them;
 - ♦ to diagnose various inflammatory and non-inflammatory processes of the organ of vision and its appendages, to carry out differential diagnostics between them;
 - ♦ choose an adequate method of anesthesia for carrying out a particular intervention
 - ♦ choose the appropriate surgical tactics for different stages of development of inflammation of the organ of vision and its appendages;
 - ♦ choose the tactics of postoperative management of an ophthalmic patient, depending on the surgical intervention
 - ♦ draw up a program for conservative treatment of various inflammatory processes of the organ of vision and its appendages;
 - ♦ comply with the requirements of ethics, bioethics and deontology in their professional activities;
 - ♦ apply the acquired knowledge, abilities, skills and understanding in ophthalmology to solve typical tasks of a doctor in the field of health care in a relevant position, the scope of which is provided for by certain lists of syndromes and symptoms of diseases, physiological conditions and diseases requiring special tactics of managing

patients, emergency conditions, laboratory and instrumental research, medical manipulations.

DESCRIPTION OF THE COURSE

Forms and methods of teaching

The course will be presented in the form of lectures (10 hours), practical lessons (30 hours), independent work of students (50 hours).

The main forms of teaching the discipline are: lectures, practical exercises, independent work of students, consultations. During the teaching of the discipline, the following teaching methods are used: lectures, explanations, conversations, multimedia presentations, practicing practical skills in a simulation class, supervising a patient with writing a medical history, solving problems, oral questioning, testing, and the like.

Independent work of students consists in studying the material of lectures, as well as in preparing for the implementation of practical skills, preparation for current and final control, performing training tests, searching for information from literary sources and the Internet and conducting elements of scientific work.

Scientific work of students is carried out in the work of the circle, preparation and speeches at scientific student conferences, writing abstracts, participation in the All-Ukrainian Student Olympiad in ophthalmology.

The content of the discipline "Ophthalmology".

Topic 1. History of ophthalmology. Anatomical and functional features of the organ of vision. Research methods.

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

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

Topic 4. Diseases of the eyelids, lacrimal organs, orbits.

Topic 5. Diseases of the conjunctiva.

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

Topic 7. Diseases of the choroid.

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

Topic 9. Glaucoma. Intraocular pressure research methods.

Topic 10. Damage to the organ of vision. Urgent Care.

Topic 11. Gradual and sudden decrease in vision. Diseases of the retina and optic nerve. Changes in the organ of vision in general diseases. Medical history protection.

List of recommended literature

1. 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. ISBN 978-617-505-598-4

2. 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.

3. 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.

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 9.

5. 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 .

6. 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.

7. Atlas of Glaucoma. Second edition: textbook / Neil T. Choplin, Diane C. Lundy. - Informa healthcare, United Kingdom, 2007. -364 p. ISBN-10: 1841845183.

8. EYE Atlas. Online Atlas of Ophthalmology. / All rights Reserved, Oculisti Online. Copyright 2001. -408 p.

9. Online platform of evidence-based clinical protocols of the Ministry of Health of Ukraine <https://guidelines.moz.gov.ua/documents>

Basic textbooks for the study of the discipline (textbooks from items 1-3) can be downloaded in electronic form at the university library.

GRADING

The university uses various forms of control of classes in a specific academic discipline (oral, written, combined, testing, practical skills, etc.). The results of students' academic performance are presented in the form of an assessment on the national scale, 200-point and ECTS scale and have standardized generalized criteria for assessing knowledge:

national scale:

– the mark "**excellent**" is given to a student who systematically worked during the semester, showed versatile and in-depth knowledge of the program material during the exam, is able to successfully complete the tasks provided for by the program, has

mastered the content of the main and additional literature, realized the relationship of individual sections of the discipline, their significance for future profession, discovered creativity in understanding and using educational and program material, showed the ability to independently update and replenish knowledge; the level of competence is *high (creative)*;

– the mark "**good**" is given to a student who has discovered a complete knowledge of the educational and program material, successfully fulfills the tasks provided for by the program, has mastered the basic literature recommended by the program, has shown a sufficient level of knowledge in the discipline and is capable of independently updating and updating them in the course of further education and professional activities; the level of competence is *sufficient (constructive and variable)*;

– the mark "**satisfactory**" is given to a student who has discovered knowledge of the basic educational and program material in the amount necessary for further study and subsequent work in the profession, copes with the tasks provided for by the program, made some mistakes in the answers on the exam and when performing the exam tasks, but has the necessary knowledge to overcome the mistakes made under the guidance of a scientific and pedagogical worker; level of competence - *medium (reproductive)*;

– the mark "**unsatisfactory**" is given to a student who did not reveal sufficient knowledge of the main educational and program material, made fundamental mistakes in performing the tasks provided for in the program, cannot use knowledge in further training without the help of a teacher, and could not master the skills of independent work; the level of competence is *low (receptive-productive)*.

Current control

Current control is carried out at each practical lesson through oral questioning or written control. After studying each section, based on the control of theoretical knowledge, practical skills and abilities, the control of the acquisition of practical skills is carried out. The student's current educational activity is assessed in a practical lesson on a 4-point (traditional) scale.

The student can receive additional (bonus) points for completing individual tasks:

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

The number of points that are awarded for various types of individual assignments depends on their volume and significance, are determined by the standard and work programs of the discipline and are added to the sum of points scored by students for current educational activities for a specific section. Grade for individual assignments is

awarded to a student only if they are successfully completed and protected. Grade is added to current grades.

Final control

The form of the final control is a differentiated test, which is assessed on a 4-point scale.

Differentiated credit is given in the last lesson in the discipline based on the results of the final interview with the obligatory performance by the student of all types of work stipulated by the work curriculum (subject to attending all classes, receiving a positive assessment to control the development of practical skills) and rated for current educational activities on average not lower 3.00.

The means of diagnosing the assimilation of the material is the control of the implementation of practical skills (demonstration of the methodology and technique for the implementation of the proposed practical skills in the discipline), an oral answer to 2 clinical tasks of the Krok-2 type and theoretical questions.

The grade received for the answer on the differentiated test and the average current academic performance in the study of the discipline are used to calculate the arithmetic mean, which is the overall grade for the discipline.

In the student's record book, the teacher enters the grade for the discipline on the traditional and 200-point scale.

A multi-point scale characterizes the actual progress of each student in mastering the academic discipline. The conversion of the traditional grade in the discipline into a 200-point grade is carried out by the information and computing center of the university by the "Contingent" program according to the formula:

$$\text{grade point average (current / by discipline) x 40}$$

national grade	points
«5»	185-200
«4»	151-184
«3»	120-150

The ECTS rating scale evaluates the achievements of students in the discipline who study in one course of one specialty, according to the points they received, by ranking.

Independent work of students.

Independent and individual work in the study of the discipline is provided by methodological developments for the independent work of students, visual teaching aids (presentations, educational films), the information resource of the department, the topic

of independent and individual tasks for each task, algorithms for the implementation of practical skills, algorithms for self- and mutual control of knowledge and skills, test tasks such as "Krok-2" for each lesson.

Independent work of students, which is provided by the topic of the lesson along with classroom work, is assessed during the current control of the topic in the corresponding lesson. The assimilation of topics that are taken out only for independent work is checked during a differentiated test.

COURSE POLICY

Deadline and retake policy

Applicants for education are expected to attend all lectures and workshops. If they missed classes, it is necessary to complete them (according to the schedule posted on the information stand of the department and according to the permission of the dean's office, if necessary).

The retake of the control of the acquisition of practical skills is carried out during the semester on an individual basis with the determination of the time of the training.

Retake of unsatisfactory grades is carried out in the last month of studying the discipline, provided that the average score for the current educational activity is less than 3.00 (carried out according to the schedule posted on the information stand of the department).

Academic Virtue Policy

Respect for academic virtue by education seekers includes:

- independent fulfillment of educational tasks, tasks of current and final control (current controls and discipline exam) of learning outcomes (for persons with special educational needs, this requirement is applied taking into account their individual needs and capabilities);

- links to sources of information when using ideas, developments, statements, information;

- provision of reliable information about the results of their own (scientific, creative) activities, the research methods used and sources of information.

It is unacceptable in educational activities for participants in the educational process to use prohibited auxiliary materials or technical means (cribs, notes, earpieces, phones, smartphones, tablets, etc.) during control events.

For violation of academic virtue, education seekers may be held liable for such academic responsibility

- decrease in the results of assessment (control work, differential credit);
- re-passing the assessment (test, differential credit);
- appointment of additional control measures (additional individual tasks, control works, tests, etc.).

Attendance and late arrival policy

Attendance at lectures and workshops is compulsory. If you are more than 15 minutes late, the lesson is considered missed and requires working out.

Mobile devices

During practical exercises, the use of a smartphone, tablet or other device for storing and processing information is allowed only with the permission of the teacher.

When conducting any form of control, the use of mobile devices and their accessories is strictly prohibited.

Audience behavior

During the lessons it is allowed: to leave the audience for a short time, if necessary and with the permission of the teacher; photograph presentation slides; actively participate in the class.

During the lessons it is prohibited: to eat (except for persons whose special medical condition requires another - in this case, medical confirmation is required), smoking, drinking alcoholic and low-alcohol drinks or drugs; use obscene language or use words that offend the honor and dignity of colleagues and faculty; gamble; damage the material and technical base of the university (spoil inventory, equipment; furniture, walls, floors, litter premises and territories), make noise, shout or listen to loud music in classrooms and even in the corridors during classes.