[Medicinski fakultet u Rijeci]

Curriculum
2023/2024

[Za kolegij]

Ophtalmology

Study program:	**Medical Studies in English (R)** [Sveučilišni integrirani prijediplomski i diplomski studij]
Department:	**[Katedra za oftalmologiju]**
Course coordinator:	**izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med.**
Year of study:	**5**
ECTS:	**3.5**
Incentive ECTS:	**0 (0.00%)**
Foreign language:	**Possibility of teaching in a foreign language**

Course information:

The course " Ophtalmology" is mandatory course in the fifth year of the Integrated Undergraduate and Graduate University Study of Medicine in English and consists of 36 hours of lectures and 24 hours of practical classes (3.5 ECTS). Most of the course are held at the Eye Clinic of the Clinical Hospital Center Rijeka except for lectures that are held online.

Course objective:

Acquisition of basic knowledge and clinical skills in the field of ophtalmology including a basic understanding of eye diseases and eye manifestations of systemic diseases. It provides appropriate levels of primary eye care, and medical students should learn the indications and need for referral to ophthalmologists for management of specialty cases. There has been a spectrum of teaching methods of ophthalmology for medical students consisting of 1) traditional didactic lectures and clinical demonstrations, 2) Illustrative case studies to highlight certain eye diseases, 3) Evidence-based medical teaching, pairing ophthalmic teaching with neuroscience, neurology, endocrinology, pediatrics, and other relevant subjects.

Ophthalmology is mostly a surgical specialty, so medical students should be given an opportunity to observe procedures in the operating room. By allowing students to be exposed to the surgical procedures, they will acquire a more realistic understanding of ophthalmic practice.

Course content:

History of ophthalmology. Anatomy and fiziology of eye and adnexa. Eye disease symptoms. Measurement of visual aquity, glasses and contact lenses prescription. Conjunctival diseases. Corneal diseases. Lens and cataract. Lacrimal drainage system disorders. Eyelids disorders. Orbital diseases. Strabismus and amblyopia. Glaucoma. Optic nerve and neuroophtalmology. Retina, retinal diseases and vitreoretinal surgery. Eye trauma. Tumors of eye and adnexa. Uveitis. Drugs in ophtalmology. Eye and systemic diseases. Telemedicine and arteficial inteligence in ophtalmology. Lasers in ophtalmology. Intraocular lenses. Refractive surgery. Corneal transplantation. Eye banking.

Class performance:

The estimated duration of classes is six weeks. Classes are performed through lectures and practicals. Active participations is expected and monitored during the classes. Teachers discuss with students the specific patological conditions of individual patients at the clinic. There will be mandatory written tests (2) held at the end of practical and oral final exam. The student will gain 3.5 ECTS by fulfilling all the above obligations.

List of assigned reading:

1. Harold A. Stein, Raymond M. Stein, Melvin I. Freeman. The Ophtalmic Assistant. eBook avaliable at Clinical Key base enabled by the Faculty of Medicine¨s Library. 10th Edition, 2018: link to book: Ophthalmic Assistant, The - ClinicalKey

2. John F. Salmon. Kanski´s Clinical Ophtalmology. 9th Edition,2020. eBook avaliable at Clinical Key base enabled by the Faculty of Medicine¨s Library: link to book: Kanski's Clinical Ophthalmology - ClinicalKey

Remote Access - ClinicalKey

List of optional reading:

1. Myron Yanoff , Jay s. Duker. Ophtalmology. 5th Edition,2019. eBook avaliable at Clinical Key base enabled by the Faculty of Medicine´s Library.

2. Myron Yanoff, Joseph Sassani. Ocular pathology. 8th Edition, 2018. eBook avaliable at Clinical Key base enabled by the Faculty of Medicine¨s Library.

Curriculum:

[Vježbe] list (with titles and explanation):

P1.- P2. Introduction and ophtalmic history taking

Introduction, visit to the Eye Clinic and explain specifics of taking medical history in ophtalmic patients. Know the necessary anamnestic data that should allways be examined in a ophtalmic patient.

P3. Visual aquity testing

Students should understand the concept of distance visual acuity testing with and without correction and with a pinhole. Students should understand the purpose of measuring near visual acuity with and without correction and testing each eye individually. They should recognize different types of visual charts.

P4. Understending of ocular anatomy (model)

Students should be able to define each of these structures and describe their function: eyelids, sclera, limbus, iris, pupil, conjunctiva, cornea, extraocular muscles, anterior chamber, lens, ciliary body, posterior chamber, vitreous cavity, retina, macula, choroids, optic nerve.

P5. External Inspection, slit lamp examination

Students should understand the external ocular anatomy and evaluate the position of the lids and inspect the conjunctiva, sclera,cornea and iris with a penlight. Using slit lamp for anterior segment examination, perform basic biomicroscopy.

P6. Pupillary Reaction Testing, Ocular Motility Testing, Confrontation Field Testing

Students should assess the direct and consensual pupillary reaction. Students should understand the importance of assessing ocular motility in the six cardinal positions of gaze and ocular alignment in primary position. Students should understand the principle and the technique of determining the peripheral visual field by finger counting confrontation technique

P7. Direct and indirect Ophthalmoscopy

Students should understand the use of a direct ophthalmoscope and know the importance of testing the patient’s right eye with the ophthalmoscope held in the examiner’s right hand, and left eye with the direct ophthalmoscope held in the examiner’s left hand. Students should understand the basic function of an ophthalmoscope and should know how to adjust the focus. They should understand principles of indirect ophtalmoscopy without performing.

P8. Pupillary Dilatation

Students should understand how to pharmacologically dilate pupils for examination of the ocular fundus. Students should understand the difference between retinal arterioles and retinal venules, the normal appearance of the optic nerve head, retinal pigment epithelium, and foveal reflex. Student should also recognize the normal uniform red-orange background retinal color due to retinal pigment epithelium.

P9. Upper Lid Eversion, Fluorescein Staining of the Cornea

Students should know how to revert the upper lid and examine for the presence of foreign bodies. Students should know how to apply topical fluorescein and interpret staining of the cornea for detection of a corneal epithelial defect.

P10. Red eye examination

Students should know how to make differential diagnosis of red eye, and treat allergic and bacterial conjunctivitis

P11. Intraocular Pressure Measurement

Students should understand the concept of assessing intraocular pressure, but are not expected to measure intraocular pressure with a tonometer

P12. Perimetry

Getting acquainted with performing different types of vision field and diagnostics of disorders. Review of images.

P13.- P14. Imaging examinations in the ophthalmology (fluorescein angiography of retinal vessels, optical coherence tomography-OCT, ultrasonography, X-ray, CT

Introduction to the technique of performing fluorescein angiography, independent recording of optical coherent tomography, review of ultrasound, CT and X-rays images.

P15., P16. Lasers in ophtalmology, ophtalmic surgery videos, intravitreal injections

Getting acquainted with lasers used in ophthalmology, getting acquainted with the operating block and operating techniques, reviewing operations-ophtalmic surgery videos, getting acquainted with the intravitreal injections technique

P17.

Clinical cases

Patient review and application of acquired knowledge.

P18

Clinical cases

Patient review and application of acquired knowledge.

P19

Clinical cases

Patient review and application of acquired knowledge.

P20

Clinical cases

Patient review and application of acquired knowledge.

P21

Clinical cases

Patient review and application of acquired knowledge.

P22

Clinical cases

Patient review and application of acquired knowledge.

P23

Clinical cases

Patient review and application of acquired knowledge.

P24.

Clinical cases

Patient review and application of acquired knowledge.

[Predavanja] list (with titles and explanation):

L1. Introduction and history of ophtalmology

Get acquainted with the goal of the course of ophthalmology. Get acquainted and adopt knowledge about the historical facts of the development of ophthalmology.

L2. Eye anatomy

Remember the basics of anatomy of the eye, which is a prerequisite for further understanding of eye diseases.

L3. Eye physiology

Repetition of the basics of eye, orbit and eye adnex physiology in order to better understand pathophysiological processes.

L4. Basic symptoms of eye diseases

Get acquainted with the basic symptomatology of eye diseases and recognize certain conditions that can seriously impair vision function.

L5. Eye refraction, eyeglasses and contact lenses.

Getting to know and understand the physical principles of refractive eye errors, basic symptomatology and ways of correcting them. The student should understand that the human eye is an optical system and principles of common refractive errors, such as myopia, hyperopia,astigmatism, and presbyopia. Master the principles of eyeglass correction of refractive anomalies and the use of contact lenses in the correction of various eye anomalies. The student is expected to know how to measure visual acuity with a near card and near correction.

L6. Conjunctival diseases

Students should understand anterior segment anatomy of the human eye and know the signs and symptoms of common causes of red eye. It is expected to acquire knowledge about certain inflammatory and degenerative conjunctival conditions and various tumor processes.

L7. Corneal diseases

Adopt knowledge about corneal anomalies (keratoconus, keratoglobus), dystrophy and corneal degeneration, and bacterial, viral and parasitic inflammations. Distinguish the types of surgical procedures on the cornea, and the principle of therapeutic action of amnion membrane transplantation.

L8. Lens and cataract

Students should recognize the symptoms and ophthalmic signs of cataract as a cause of decreased central visual acuity. They should understand the general principles of cataract surgery and correction of aphakia with intraocular lenses and contact lenses.

L9. Lacrimal drainage system disorders

Explain ways of causing lacrimal drainage system disorders and identify different types of inflammatory conditions of individual parts of the lacrimal drainage system.

L10. Orbital and adnexal diseases

Students should understand the normal anatomy of the adnexal structures and orbit, main types of disorders and the presenting signs and symptoms of serious conditions associated with ocular and systemic morbidity, such as orbital cellulitis.

L11. Strabismus and amblyopia

Students should understand the normal anatomy of the extra ocular muscles and normal ocular alignment. Students should understand the principles of abnormal ocular alignment, such as exotropia, and esotropia, and the risk of amblyopia in children.

L12. L13. Glaucoma

Students should understand the anterior segment anatomy and understand the circulation of aqueous humor in the normal human eye and in primary open angle glaucoma and primary angle closure glaucoma. Students should recognize the risk factors, signs, and symptoms of primary open angle glaucoma and angle closure glaucoma.

L14. Optic nerve and neuro-ophtalmology

Students should understand the relationship of the eye and visual system within the context of the central nervous system. Students should also know how to test pupillary reactions and how to assess peripheral visual fields, and should understand conditions which require immediate ophthalmic evaluation, such as sudden vision loss, papilledema, and anterior ischemic optic neuropathy with giant cell arteritis in the elderly patient, III nerve palsy with pupillary involvement, IV and VI nerve palsies.

L15. Eye and adnexa tumors

Students should understand that malignancy may affect the eye and adnexa and recognize the signs and symptoms of childhood retinoblastoma.

L16. i L17. Diabetic retinopathy

Students should understand the normal appearance and function of the retina. They should recognize abnormal anatomy and the signs and symptoms of conditions that are associated with important causes of visual loss, such as diabetic retinopathy. Hallmarks of diabetic retinopathy has to be recognized -hard exudates, hemorrhages and microaneurysms in Nonproliferative Diabetic Retinopathy,soft exudates and intraretinal microvascular abnormalities in Preproliferative retinopathy and neovascularization of the optic disc (NVD), neovascularization elsewhere and vitreous hemorrhage in Proliferative retinopathy.

L18. Retinal detachment

Students should understand the normal appearance and function of the retina. They should recognize abnormal anatomy and the signs and symptoms of conditions that are associated with important causes of visual loss, such as retinal detachment. Know how to clearly define certain types of retinal detachment and ways of treating them. Special review of new laser and microsurgical methods of emergency care of patients with retinal detachment. Get acquainted with laser methods of disposal of early retinal ruptures and pneumoretinopexy procedure.

L19. Retinopathy of prematuritiy

Student should understand that retinopathy of prematurity is an eye disease that can happen in premature babies and without treatment could lead to blindness. Babies born erlier than 31 weeks of gestation, or who weigh less than 1500 grams at birth, are most at risk. Severe cases need laser photocoagulation of the retina, intravitreal anti-VEGF therapy or surgery.

L20. Age-related macular degeneration

Students should understand the normal appearance and function of the macula. They should recognize abnormal anatomy and the signs and symptoms of conditions that are associated with important causes of visual loss, such as macular degeneration. They should distinguish between different types and stages of macular degeneration (dry and wet form) as well as treatments and ways of diagnosis and therapy.

L21. Retinal vascular diseases

Students should understand the normal appearance and function of the retinal blood vessels. They should recognize abnormal anatomy and the signs and symptoms of conditions that are associated with important causes of visual loss, such as central retinal artery and central retinal vein occlusion. It is also necessary to know the ways of diagnosis and therapy of these conditions.

L22. Anterior eye segment trauma and surgery

Get acquainted with the mechanisms of trauma of the anterior eye segment and possible ways of surgical treatments.

L23. Posterior eye segment trauma and surgery

Get acquainted with the mechanisms of trauma of the posterior eye segment and possible ways of surgical treatments.

L24. and L25. Vitreoretinal surgery I and II

Students should know modern surgical techniques for the management of serious retina and vitreous conditions that can lead to serious vision loss or blindness. They should distinguish between milder conditions that can be solved by laser or pneumoretinopexy until the most complex procedure of the pars plana vitrectomy

L26. Uveitis

Acquisition of knowledge about different types of uveitis with regard to cause and anatomical placement, diagnostic tests that need to be done and modern possibilities of therapy.

L27. Drugs in ophtalmology

Acquisition of knowledge about the types of drugs used in ophthalmology and the pathways of their application.

L28. Ocular manifestation of the the systemic disease

Students should understand the signs and symptoms of ocular conditions that are associated with important systemic diseases and diagnoses, such as congenital, traumatic, vascular, neoplastic, autoimmune, idiopathic, infectious, metabolic or endocrine, and pharmacologic or toxic conditions.

L29. Telemedicine and arteficial inteligence (AI) in ophtalmology

Get acquainted with the possibilities of telemedicine in ophthalmology in the conditions of Covid 19 and post-Covid 19

period as well as technical and legal assumptions for them. Understand AI capabilities in diagnosis, therapy and predicting treatment outcomes.

L30. Lasers in ophtalmology

Gain knowledge of the different types of lasers used in ophthalmology and get acquainted with the mechanisms of their action and the outcomes of treatment.

L31. Intraocular lenses

Get acquainted with different types of implantation lenses in ophthalmology and basic principles of their action. Understand the concept of correcting the refractive error caused lens removal.

L32. i L33. Refractive surgery I and II

Students should understand the eye as an optical system and should know how refractive surgery corrects common refractive errors of emmetropia, myopia,hyperopia, and astigmatism. Students should understand refractive errors and their relations to eye length, corneal curvature, and lens status, describe refractive surgical theory and practice and understand risks and benefits of commonly discussed and performed refractive procedures. They should be able to explain the principle of performing operations as PRK and LASIK. It needs to be understud that success in refractive surgery depends on careful preoperative evaluation, exclusion of systemic diseases and eye disorders that may be contraindicated and assessment of risks and benefits of each procedure.

L34. Corneal transplatation (Keratoplasty)

Get acquainted and acquire knowledge about various procedures of corneal transplantation (perforative, lamellar, DSEK, DMEK, etc.) and about the possibly complications.

L34. Corneal transplatation (Keratoplasty)

Get acquainted and acquire knowledge about various procedures of corneal transplantation (perforative, lamellar, DSEK, DMEK, etc.) and about the possibly complications.

L35. Eye banking

Get acquainted with the principles and procedures within the eye bank and the different time storage of eye tissues for the purpose of transplant surgery.

L36. Final lecture

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Student obligations:

Attendance on lectures and practicals is mandatory. Communication between the teaching stuff and students will take place on Merlin e-learning system or by e-mail addresses (@uniri.hr).

Exam (exam taking, description of the written/oral/practical part of the exam, point distribution, grading criteria):

Student assessment is carried out in accordance with the current University of Rijeka Study Regulations and the Student Regulations at the Faculty of Medicine Rijeka (adopted by the Faculty Council of the Faculty of Medicine Rijeka).

Students' performance will be evaluated during the course and at the final exam. Out of a total of 100 credits, a student can earn 70 credits (70%) during the course with written tests, and 30 credits (30%) at the final oral exam.

Student assessment is performed using ECTS (A-F) and number system (1-5). Student assessments in ECTS system is carried out by is performed by absolute distribution, and according to graduate assessment criteria.

Out of the maximum 70 credits that can be achieved during class, the student must collect a minimum of 40 credits to take the final exam. Students who collect less than 40 credits will have the opportunity for one remedial written test and, if they pass, they will be able to take the final exam

Students who collect between 40 and 49.9 credits (FX rating category) will have the opportunity for one remedial exam in the autumn exam period. If they pass, they receive an E grade regardless of the number of grade points achieved. Students who collect 39.9 and fewer grade points (F grade category) must reenroll in the course

The student acquires grade points by completing the tasks as follows:

During class, the following activities will be monitored:

Regulary class attendance:

A student can miss 30% of classes solely for health reasons, which justifies the doctor's apology. Attendance at written tests is mandatory.

There is no possibility to compensate for the absence of classes or exercises. If a student is justified or unjustifiably absent from more than 30% of classes, he cannot continue following the course "Ophthalmology" and loses the opportunity to take the final exam. In this case student collected 0 ECTS credits and was rated F.

Written tests

During the course, mandatory inter-examinations are taken in the form of a written test (Test I and II), which checks the knowledge acquired during lectures and exercises. Each test has 50 questions with one or two correct answers offered and carries 25 grade points each. The criterion for obtaining grade points that turn into positive grades is 50% of the correctly resolved issues (>25). The inter-examination laid is not transferable, that is, it is valid only for the current academic year.

Success in the written tests turns into credits as follows:

Correct answers	Credits	
0-25	0	
26-32	20	Minimal positive grade
33-38	25	
39-45	30	
46-50	35	

Final exam (30 credits in total):

The final exam consists of a mandatory oral exam. Both parts of the written tests must be positively assessed. The oral exam carries 30 credits (range from 0-30).

Success in the final oral exam turns into rating points as follows:

Grade	Credits
unsufficient	0
sufficient	8
good	16
very good	24
excelent	30

For passage in the final exam and final assessment (including the listing of previously achieved grade points during class), the student in the final exam must be positively evaluated.

The ECTS grading system is defined by the following criteria:

A (5) – 90 -100% credits B (4)– 75 - 89,9% credits C (3) – 60 - 74,9% credits D (2) -- 50 - 59,9% credits F (1) – 0 - 49,9% credits

Grades in ECTS grading system are converted in numerical system by the following criteria: A = excellent (5) B = very good (4) C = good (3) D = sufficient (2) F = insufficient (1)

Other notes (related to the course) important for students:

Course content and all information related to the course as well as exam dates can be found on the Merlin e-learning system and on the web pages of the Department of Ophtalmology

All student inquiries, regarding the course and possible problems, remarks and inquiries are provided exclusively using the official e-mail addresses (@medri.uniri.hr) or via the Merlin e-learning system. It is possible to arrange consultations with the teaching staff during working hours.

Practicals will be held at the Eye Clinic of the Clinical Hospital Center Rijeka or at the EyeClinic Svjetlost, Heinzelova 39, Zagreb.

Lectures will be held at the Eye Clinic of the Clinical Hospital Center Rijeka, Lecture Hall 1 or via MS Teams. Team name is OPHTALMOLOGY 2022./2023.

COURSE HOURS 2023/2024

Ophtalmology

[Predavanja] (Place and time or group)	**[Vježbe]** (Place and time or group)
15.01.2024	
L1. Introduction and history of ophtalmology: • [KBC Rijeka] (14:00 - 16:00) [160] ◦ O_392 L2. Eye anatomy: • [KBC Rijeka] (14:00 - 16:00) [160] ◦ O_392	
izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
16.01.2024	
L3. Eye physiology: • [KBC Rijeka] (12:00 - 15:00) [160] ◦ O_392 L4. Basic symptoms of eye diseases: • [KBC Rijeka] (12:00 - 15:00) [160] ◦ O_392 L5. Eye refraction, eyeglasses and contact lenses.: • [KBC Rijeka] (12:00 - 15:00) [160] ◦ O_392 L6. Conjunctival diseases: • [ONLINE] (15:00 - 16:00) [1795] ◦ O_392	
nasl.doc. dr. sc. Bohač Maja, dr. med. [1795] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
18.01.2024	
L7. Corneal diseases: • [ONLINE] (14:00 - 15:00) [1795] ◦ O_392 L8. Lens and cataract: • [ONLINE] (15:00 - 16:00) [1814] ◦ O_392	
nasl.doc. dr. sc. Bohač Maja, dr. med. [1795] · nasl. doc. dr. sc. Drača Nataša, dr. med. [1814]	
22.01.2024	

L9. Lacrimal drainage system disorders: • [ONLINE] (08:00 - 10:00) [1770] ◦ O_392 L10. Orbital and adnexal diseases: • [ONLINE] (08:00 - 10:00) [1770] ◦ O_392 L11. Strabismus and amblyopia: • [ONLINE] (10:00 - 13:00) [296] ◦ O_392 L12. L13. Glaucoma: • [ONLINE] (10:00 - 13:00) [296] ◦ O_392	P1.- P2. Introduction and ophtalmic history taking: • [KBC Rijeka] (13:00 - 15:00) [296] [2294] ◦ O-P3 ◦ O-P4
redovni asistent Lukanović Kegalj Andrea, dr. med. [2294] · nasl. izv. prof. dr. sc. Mravičić Ivana, dr. med. [1770] · izv. prof. dr. sc. Pelčić Goran, dr. med. [296]	
23.01.2024	
	P1.- P2. Introduction and ophtalmic history taking: • [KBC Rijeka] (13:00 - 15:00) [296] [160] ◦ O-P1 ◦ O-P2
izv. prof. dr. sc. Pelčić Goran, dr. med. [296] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
24.01.2024	
L14. Optic nerve and neuro-ophtalmology: • [KBC Rijeka] (08:00 - 10:00) [296] ◦ O_392 L15. Eye and adnexa tumors: • [KBC Rijeka] (08:00 - 10:00) [296] ◦ O_392 L16. i L17. Diabetic retinopathy: • [KBC Rijeka] (10:00 - 13:00) [160] ◦ O_392 L18. Retinal detachment: • [KBC Rijeka] (10:00 - 13:00) [160] ◦ O_392	P1.- P2. Introduction and ophtalmic history taking: • [KBC Rijeka] (13:00 - 15:00) [296] [160] ◦ O-P5 ◦ O-P6
izv. prof. dr. sc. Pelčić Goran, dr. med. [296] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
26.01.2024	

L22. Anterior eye segment trauma and surgery: • [ONLINE] (08:00 - 09:00) [1795] ◦ O_392 L21. Retinal vascular diseases: • [ONLINE] (09:00 - 10:00) [1814] ◦ O_392 L19. Retinopathy of prematuritiy: • [ONLINE] (10:00 - 15:00) [160] ◦ O_392 L20. Age-related macular degeneration: • [ONLINE] (10:00 - 15:00) [160] ◦ O_392 L26. Uveitis: • [ONLINE] (10:00 - 15:00) [160] ◦ O_392 L27. Drugs in ophtalmology: • [ONLINE] (10:00 - 15:00) [160] ◦ O_392 L28. Ocular manifestation of the the systemic disease: • [ONLINE] (10:00 - 15:00) [160] ◦ O_392	
nasl.doc. dr. sc. Bohač Maja, dr. med. [1795] · nasl. doc. dr. sc. Drača Nataša, dr. med. [1814] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
29.01.2024	
L24. and L25. Vitreoretinal surgery I and II: • [ONLINE] (08:00 - 10:00) [1969] ◦ O_392	P3. Visual aquity testing: • [KBC Rijeka] (13:00 - 15:00) [160] [296] [2760] ◦ O-P3 ◦ O-P4 P4. Understending of ocular anatomy (model): • [KBC Rijeka] (13:00 - 15:00) [160] [296] [2760] ◦ O-P3 ◦ O-P4
nasl. izv. prof. dr.sc. Lazić Ratimir, dr. med. [1969] · izv. prof. dr. sc. Pelčić Goran, dr. med. [296] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160] · naslovni asistent Šimić Tin, dr.med [2760]	
30.01.2024	
	P3. Visual aquity testing: • [KBC Rijeka] (13:00 - 15:00) [2294] [160] ◦ O-P1 ◦ O-P2 P4. Understending of ocular anatomy (model): • [KBC Rijeka] (13:00 - 15:00) [2294] [160] ◦ O-P1 ◦ O-P2
redovni asistent Lukanović Kegalj Andrea, dr. med. [2294] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
31.01.2024	

L29. Telemedicine and arteficial inteligence (AI) in ophtalmology: • [KBC Rijeka] (08:00 - 10:00) [160] ◦ O_392 L30. Lasers in ophtalmology: • [KBC Rijeka] (08:00 - 10:00) [160] ◦ O_392 L31. Intraocular lenses: • [ONLINE] (10:00 - 13:00) [1818] [1795] ◦ O_392 L32. i L33. Refractive surgery I and II: • [ONLINE] (10:00 - 13:00) [1818] [1795] ◦ O_392	
nasl.doc. dr. sc. Bohač Maja, dr. med. [1795] · nasl. prof. dr. sc. Gabrić Nikica, dr. med. [1818] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
01.02.2024	
	P3. Visual aquity testing: • [KBC Rijeka] (12:00 - 14:00) [2294] [2761] ◦ O-P5 ◦ O-P6 P4. Understending of ocular anatomy (model): • [KBC Rijeka] (12:00 - 14:00) [2294] [2761] ◦ O-P5 ◦ O-P6
redovni asistent Lukanović Kegalj Andrea, dr. med. [2294] · naslovna asistentica Paravić Tamara, dr.med. [2761]	
02.02.2024	
L34. Corneal transplatation (Keratoplasty): • [ONLINE] (08:00 - 10:00) [1818] ◦ O_392 L35. Eye banking: • [ONLINE] (08:00 - 10:00) [1818] ◦ O_392 L23. Posterior eye segment trauma and surgery: • [ONLINE] (10:00 - 12:00) [160] ◦ O_392 L36. Final lecture: • [ONLINE] (10:00 - 12:00) [160] ◦ O_392	
nasl. prof. dr. sc. Gabrić Nikica, dr. med. [1818] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
05.02.2024	

	P5. External Inspection, slit lamp examination:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P3
	  ◦ O-P4
	
	P6. Pupillary Reaction Testing, Ocular Motility Testing, Confrontation Field Testing:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P3
	  ◦ O-P4
	
	P7. Direct and indirect Ophthalmoscopy:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P3
	  ◦ O-P4
	
	P8. Pupillary Dilatation:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P3
	  ◦ O-P4
	
	P9. Upper Lid Eversion, Fluorescein Staining of the Cornea:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P3
	  ◦ O-P4
	
	P10. Red eye examination:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P3
	  ◦ O-P4
	
	P11. Intraocular Pressure Measurement:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P3
	  ◦ O-P4
	
	P12. Perimetry:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P3
	  ◦ O-P4

nasl.doc. dr. sc. Bohač Maja, dr. med. [1795] · nasl. doc. dr. sc. Drača Nataša, dr. med. [1814] · nasl. izv. prof. dr. sc. Mravičić Ivana, dr. med. [1770]	
06.02.2024	

	P5. External Inspection, slit lamp examination:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1770] [1795] [1814]
	  ◦ O-P1
	  ◦ O-P2
	
	P6. Pupillary Reaction Testing, Ocular Motility Testing, Confrontation Field Testing:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1770] [1795] [1814]
	  ◦ O-P1
	  ◦ O-P2
	
	P7. Direct and indirect Ophthalmoscopy:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1770] [1795] [1814]
	  ◦ O-P1
	  ◦ O-P2
	
	P8. Pupillary Dilatation:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1770] [1795] [1814]
	  ◦ O-P1
	  ◦ O-P2
	
	P9. Upper Lid Eversion, Fluorescein Staining of the Cornea:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1770] [1795] [1814]
	  ◦ O-P1
	  ◦ O-P2
	
	P10. Red eye examination:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1770] [1795] [1814]
	  ◦ O-P1
	  ◦ O-P2
	
	P11. Intraocular Pressure Measurement:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1770] [1795] [1814]
	  ◦ O-P1
	  ◦ O-P2
	
	P12. Perimetry:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1770] [1795] [1814]
	  ◦ O-P1
	  ◦ O-P2

nasl.doc. dr. sc. Bohač Maja, dr. med. [1795] · nasl. doc. dr. sc. Drača Nataša, dr. med. [1814] · nasl. izv. prof. dr. sc. Mravičić Ivana, dr. med. [1770]	
07.02.2024	

	P5. External Inspection, slit lamp examination:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P5
	  ◦ O-P6
	
	P6. Pupillary Reaction Testing, Ocular Motility Testing, Confrontation Field Testing:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P5
	  ◦ O-P6
	
	P7. Direct and indirect Ophthalmoscopy:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P5
	  ◦ O-P6
	
	P8. Pupillary Dilatation:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P5
	  ◦ O-P6
	
	P9. Upper Lid Eversion, Fluorescein Staining of the Cornea:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P5
	  ◦ O-P6
	
	P10. Red eye examination:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P5
	  ◦ O-P6
	
	P11. Intraocular Pressure Measurement:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P5
	  ◦ O-P6
	
	P12. Perimetry:
	• [Eye Clinic "Svjetlost"] (08:00 - 16:00) [1795] [1770] [1814]
	  ◦ O-P5
	  ◦ O-P6

nasl.doc. dr. sc. Bohač Maja, dr. med. [1795] · nasl. doc. dr. sc. Drača Nataša, dr. med. [1814] · nasl. izv. prof. dr. sc. Mravičić Ivana, dr. med. [1770]	
08.02.2024	

	P13.- P14. Imaging examinations in the ophthalmology (fluorescein angiography of retinal vessels, optical coherence tomography-OCT, ultrasonography, X-ray, CT: • [KBC Rijeka] (08:00 - 14:00) [2760] [2761] ◦ O-P3 ◦ O-P4 P15., P16. Lasers in ophtalmology, ophtalmic surgery videos, intravitreal injections: • [KBC Rijeka] (08:00 - 14:00) [2760] [2761] ◦ O-P3 ◦ O-P4 P17.: • [KBC Rijeka] (08:00 - 14:00) [2760] [2761] ◦ O-P3 ◦ O-P4 P18: • [KBC Rijeka] (08:00 - 14:00) [2760] [2761] ◦ O-P3 ◦ O-P4
naslovna asistentica Paravić Tamara, dr.med. [2761] · naslovni asistent Šimić Tin, dr.med [2760]	
09.02.2024	
	P13.- P14. Imaging examinations in the ophthalmology (fluorescein angiography of retinal vessels, optical coherence tomography-OCT, ultrasonography, X-ray, CT: • [KBC Rijeka] (08:00 - 14:00) [160] [2761] ◦ O-P1 ◦ O-P2 P15., P16. Lasers in ophtalmology, ophtalmic surgery videos, intravitreal injections: • [KBC Rijeka] (08:00 - 14:00) [160] [2761] ◦ O-P1 ◦ O-P2 P17.: • [KBC Rijeka] (08:00 - 14:00) [160] [2761] ◦ O-P1 ◦ O-P2 P18: • [KBC Rijeka] (08:00 - 14:00) [160] [2761] ◦ O-P1 ◦ O-P2
naslovna asistentica Paravić Tamara, dr.med. [2761] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
12.02.2024	

	P13.- P14. Imaging examinations in the ophthalmology (fluorescein angiography of retinal vessels, optical coherence tomography-OCT, ultrasonography, X-ray, CT: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2760] ◦ O-P5 ◦ O-P6 P15., P16. Lasers in ophtalmology, ophtalmic surgery videos, intravitreal injections: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2760] ◦ O-P5 ◦ O-P6 P17.: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2760] ◦ O-P5 ◦ O-P6 P18: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2760] ◦ O-P5 ◦ O-P6
redovni asistent Lukanović Kegalj Andrea, dr. med. [2294] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160] · naslovni asistent Šimić Tin, dr.med [2760]	
13.02.2024	
	P19: • [KBC Rijeka] (08:00 - 14:00) [160] [296] [2761] ◦ O-P3 ◦ O-P4 P20: • [KBC Rijeka] (08:00 - 14:00) [160] [296] [2761] ◦ O-P3 ◦ O-P4 P21: • [KBC Rijeka] (08:00 - 14:00) [160] [296] [2761] ◦ O-P3 ◦ O-P4 P22: • [KBC Rijeka] (08:00 - 14:00) [160] [296] [2761] ◦ O-P3 ◦ O-P4 P23: • [KBC Rijeka] (08:00 - 14:00) [160] [296] [2761] ◦ O-P3 ◦ O-P4 P24.: • [KBC Rijeka] (08:00 - 14:00) [160] [296] [2761] ◦ O-P3 ◦ O-P4
naslovna asistentica Paravić Tamara, dr.med. [2761] · izv. prof. dr. sc. Pelčić Goran, dr. med. [296] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
14.02.2024	

	P19: • [KBC Rijeka] (08:00 - 14:00) [296] [160] ◦ O-P1 ◦ O-P2 P20: • [KBC Rijeka] (08:00 - 14:00) [296] [160] ◦ O-P1 ◦ O-P2 P21: • [KBC Rijeka] (08:00 - 14:00) [296] [160] ◦ O-P1 ◦ O-P2 P22: • [KBC Rijeka] (08:00 - 14:00) [296] [160] ◦ O-P1 ◦ O-P2 P23: • [KBC Rijeka] (08:00 - 14:00) [296] [160] ◦ O-P1 ◦ O-P2 P24.: • [KBC Rijeka] (08:00 - 14:00) [296] [160] ◦ O-P1 ◦ O-P2
izv. prof. dr. sc. Pelčić Goran, dr. med. [296] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	
15.02.2024	
	P19: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2761] ◦ O-P5 ◦ O-P6 P20: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2761] ◦ O-P5 ◦ O-P6 P21: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2761] ◦ O-P5 ◦ O-P6 P22: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2761] ◦ O-P5 ◦ O-P6 P23: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2761] ◦ O-P5 ◦ O-P6 P24.: • [KBC Rijeka] (08:00 - 14:00) [160] [2294] [2761] ◦ O-P5 ◦ O-P6
redovni asistent Lukanović Kegalj Andrea, dr. med. [2294] · naslovna asistentica Paravić Tamara, dr.med. [2761] · izv. prof. prim. dr. sc. Čaljkušić-Mance Tea, dr. med. [160]	

List of lectures, seminars and practicals:

[PREDAVANJA] (TOPIC)	Number of hours	Location
L1. Introduction and history of ophtalmology	1	[KBC Rijeka]
L2. Eye anatomy	1	[KBC Rijeka]
L3. Eye physiology	1	[KBC Rijeka]
L4. Basic symptoms of eye diseases	1	[KBC Rijeka]
L5. Eye refraction, eyeglasses and contact lenses.	1	[KBC Rijeka]
L6. Conjunctival diseases	1	[ONLINE]
L7. Corneal diseases	1	[ONLINE]
L8. Lens and cataract	1	[ONLINE]
L9. Lacrimal drainage system disorders	1	[ONLINE]
L10. Orbital and adnexal diseases	1	[ONLINE]
L11. Strabismus and amblyopia	1	[ONLINE]
L12. L13. Glaucoma	2	[ONLINE]
L14. Optic nerve and neuro-ophtalmology	1	[KBC Rijeka]
L15. Eye and adnexa tumors	1	[KBC Rijeka]
L16. i L17. Diabetic retinopathy	2	[KBC Rijeka]
L18. Retinal detachment	1	[KBC Rijeka]
L19. Retinopathy of prematuritiy	1	[ONLINE]
L20. Age-related macular degeneration	1	[ONLINE]
L21. Retinal vascular diseases	1	[ONLINE]
L22. Anterior eye segment trauma and surgery	1	[ONLINE]
L23. Posterior eye segment trauma and surgery	1	[ONLINE]
L24. and L25. Vitreoretinal surgery I and II	2	[ONLINE]
L26. Uveitis	1	[ONLINE]
L27. Drugs in ophtalmology	1	[ONLINE]
L28. Ocular manifestation of the the systemic disease	1	[ONLINE]
L29. Telemedicine and arteficial inteligence (AI) in ophtalmology	1	[KBC Rijeka]
L30. Lasers in ophtalmology	1	[KBC Rijeka]
L31. Intraocular lenses	1	[ONLINE]
L32. i L33. Refractive surgery I and II	2	[ONLINE]
L34. Corneal transplatation (Keratoplasty)	1	
L34. Corneal transplatation (Keratoplasty)	1	[ONLINE]
L35. Eye banking	1	[ONLINE]
L36. Final lecture	1	[ONLINE]

[VJEŽBE] (TOPIC)	Number of hours	Location
P1.- P2. Introduction and ophtalmic history taking	2	[KBC Rijeka]

P3. Visual aquity testing	1	[KBC Rijeka]
P4. Understending of ocular anatomy (model)	1	[KBC Rijeka]
P5. External Inspection, slit lamp examination	1	[Eye Clinic "Svjetlost"]
P6. Pupillary Reaction Testing, Ocular Motility Testing, Confrontation Field Testing	1	[Eye Clinic "Svjetlost"]
P7. Direct and indirect Ophthalmoscopy	1	[Eye Clinic "Svjetlost"]
P8. Pupillary Dilatation	1	[Eye Clinic "Svjetlost"]
P9. Upper Lid Eversion, Fluorescein Staining of the Cornea	1	[Eye Clinic "Svjetlost"]
P10. Red eye examination	1	[Eye Clinic "Svjetlost"]
P11. Intraocular Pressure Measurement	1	[Eye Clinic "Svjetlost"]
P12. Perimetry	1	[Eye Clinic "Svjetlost"]
P13.- P14. Imaging examinations in the ophthalmology (fluorescein angiography of retinal vessels, optical coherence tomography-OCT, ultrasonography, X-ray, CT	2	[KBC Rijeka]
P15., P16. Lasers in ophtalmology, ophtalmic surgery videos, intravitreal injections	2	[KBC Rijeka]
P17.	1	[KBC Rijeka]
P18	1	[KBC Rijeka]
P19	1	[KBC Rijeka]
P20	1	[KBC Rijeka]
P21	1	[KBC Rijeka]
P22	1	[KBC Rijeka]
P23	1	[KBC Rijeka]
P24.	1	[KBC Rijeka]

EXAM DATES (final exam):

1.	21.02.2024.
2.	22.05.2024.
3.	12.07.2024.
4.	04.09.2024.
5.	18.09.2024.