

COURSE UNIT INFORMATION FORM

University: Comenius University in Bratislava	
Faculty: Jessenius Faculty of Medicine in Martin	
Subject code: J-S-VL-568	Name of the subject: <i>Ophthalmology</i>
Form, extent and method of teaching activities: <i>Lecture/Practical</i> <i>Extent (in hours) – per week: 1/3</i> <i>Method - attendance form</i>	
Number of credits: <i>3 credits</i>	
Recommended semester/trimester of study: <i>9 semester</i>	
Level of study: <i>joint 1st and 2nd level (MUDr.)</i>	
Prerequisites: <i>Anatomy 3, Physiology 2</i>	
Subject completion requirements: <i>Students are assessed by means of a 30-question test. The Overall assessment: A, B, C, D, E, Fx. Minimum threshold of success: E.</i>	
Learning outcomes: <i>After completion of the subject the student fully understands the anatomy and physiology of the eye, its peri-ocular structures and visual pathways. The student understands the theory and is able to apply knowledge in the basics of ophthalmic anamnesis in children, adults and elderly patients. The student is able to analyze and identify special diagnostic techniques in ophthalmology as well as imaging methods (CT, MRI, ultrasound). The graduated student deeply understands issues of refractive errors and its correction with lenses and surgery.</i> <i>After completion of the subject the student is able to identify the mechanisms leading to a decline in visual function caused by pathological changes of the eye and visual pathways. The student fully understands the pathophysiology, diagnosis, treatment and prognosis of the most prevalent retinal diseases like diabetic retinopathy, age related macular degeneration and retinal detachment.</i> <i>After completing the course the graduate is able to apply knowledge based on the history and basic tests to diagnose the most common eye diseases and different types of injuries or trauma.</i> <i>After completion of the subject the student understands the therapeutic principles of ocular diseases and ophthalmic surgical treatment and is able to identify the early signs of post operative complications like infections, haemorrhages and hypertension. The graduate understands and is able to practice first aid for eye injuries, including burns and perforations.</i>	
Teachers: <i>doc.MUDr. Peter Žiak, PhD., MUDr. Alexandra Sedláková, MUDr. Linda Mária Pršová, PhD., MUDr. Júlia Blahová, MUDr. Pavol Vencel, MUDr. Roman Lichnovský</i>	

Brief syllabus:1. Anatomy and physiology of the eye and orbit, refractive errors and correction.

Basics in refraction, retinoscopy, Keratometry, assesment of visual acuity with and without correction. ETDRS optotypes. Theory and practise with slit lamp.

2. Diseases of cornea, sclera and conjunctiva.

Examination of the cornea and conjunctiva with the slit lamp, Placido rings keratoscopy. Swab collection techniques for conjunctival samples.

3. Uveitis (anterior, intermediate and posterior). Ophthalmic presentations of HIV.

Examination of anterior chamber and vitreous with slit lamp, fundoscopy, direct and indirect ophthalmoscopy.

4. Disease of the orbit, eyelids and tear ducts.

Eyelids examination and function assessment of m.levator palp.sup., exophthalmometry, syringing of the tear ducts. Tear film assessment – Schirmer and B.U.T. test.

5. Disease of the retina (hereditary, diabetic retinopathy, hypertension retinopathy, Age related macular degeneration, Full thickness macular hole, Central serous chorioretinopathy, Retinopathy of prematurity). Ophthalmoscopy, optical coherence tomography, fluorescein angiography, Amsler chart, Colour vision test.

6. Disease of the transparent media, crystalline lens and cataract surgery.

Examination of the red papillary reflex and transparent media. Optic and ultrasound biometry, phacoemulsification.

7. Glaucoma. Dynamic and static perimetry. Tonometry (Goldman, Schiotz, non-contract). Gonioscopy. HRT II, GDx, OCT RNFL.

8. Red eye syndrome – dif. dg.(hyposphagma, Conjunctivitis, Uveitis, acute glaucoma).

Slit lamp examination, first AID for eye injury and caustication, eyelid eversion.

9. Neuro-ophthalmology and paediatric ophthalmology. optic neuropathy, and defects of visual pathways.

Pupillary defects. Strabismus. Amblyopia. Children ophthalmic examination and screening. VEP, EMG, external ocular motility, examination of diplopia and strabismus.

10. Retinal detachment, ocular tumours, dif.dg. of leucocoria. Slit lamp examination, indirect ophthalmoscopy, B-ultrasound scan, CT, MR.

Recommended literature:

- Jack Kanski, Brad Bowling. Clinical Ophthalmology: A Systematic Approach, 7th Edition. Saunders 2011.
- Adam T. Gerstenblith, Michael P. Rabinowitz et al. The wills eye manual. 6th edition. Lippincott Williams & Wilkins, Philadelphia 2012
- David J. Spalton et al. Atlas of clinical optalmology. 3rd edition. Oxford, Mosby 2005.
- Myron Yanoff, Jay S. Duker. Ophthalmology. 3rd edition. Mosby 2009.

Language of instruction needed for subject completion: English language

Notes: ---

Assessment of subjects

Evaluation:

a/ 100% attendance at seminars

b/ exam (attendance test) – max 30 points

Test evaluation (max. 50 points)

30-27 (A – excellent)

26-24 (B – very good)

23-21 (C – good)

20-19 (D – satisfying)

18 (E – sufficient)

17 and less (Fx – insufficient)

One excused absence (in accordance with the JLF UK student regulations).

The condition for successful completion of the course is 100% attendance at seminars and a minimum of 18 points from the exam.

Date of the last modification: 20.08.2025

Approved by: doc.MUDr. Peter Žiak, PhD.

