



48SJ-OPHT  
2025L  
ECTS: 3.00

## Course syllabus – part A Ophthalmology

### SUBJECT MATTER CONTENT:

#### Lecture

1. Basics in ophthalmology 2. Diagnostic in ophthalmology 3. Main ophthalmic operations 4. Basic eye diseases

#### Seminar

Additional presentation of theoretical ophthalmic knowledge with students' interaction,

#### Classes

Ophthalmology classes (practical clinical exercises).

1. Cataract: medical history taking, diagnostics (autorefractometry, non-contact tonometry, specular microscopy, slit lamp examination, supervised intraocular lens calculation, assist in USG of an eyeball), cataract surgery observation, taken part in a planning of cataract patients' treatment.
2. Glaucoma: medical history taking, diagnostics (non-contact tonometry, assist in: applanation tonometry, gonioscopy, visual field testing, glaucoma OCT), discussion about patients' treatment, assist in glaucoma surgeries: trabeculectomy, goniosynechiolysis, laser iridotomy.
3. Uveal tract inflammation: medical history, diagnostics (slit lamp examination to assess symptoms in anterior, intermediate and posterior part uveitis, intraocular pressure examination, assist in USG of the eyeball), assist in a process of additional tests planning, assist in conservative and surgical treatment, assist in planning of additional consultations.
4. Vascular disorders of the retina: A. retinal artery occlusion. B. retinal venous occlusion. C. diabetic retinopathy. D. hypertension retinopathy. Medical history, diagnostics (slit lamp examination, tonometry, assist in funduscopy, assist in fluorescein angiography, OCT of the retina, fundus colour photography)
5. Retinal detachment and pars plana (posterior) vitrectomy: symptoms of retinal detachment, diagnostics of retinal detachment: indirect ophthalmoscopy, assistance in funduscopy with tree-mirror Goldman lens, assist in USG of the eyeball examination, assist in planning of therapeutic procedures (laser therapy, pneumoretinopexy, scleral buckling surgery, assist in posterior vitrectomy)
6. First aid in ophthalmology: medical history in emergency patient, assist in examination of the injured eye (visual acuity, tonometry, examination of the eye adnexa, bone structure palpation, eye movement examination, exophthalmos examination, slit lamp examination, ophthalmological USG, OCT of the retina, fluorescein angiography, CT and MRI scans of the sockets and the head. Main concern on: foreign body of the ocular surface and practical skill of first aid with an upper eyelid everting and foreign body remove, chemical injuries of the eye with practical skills in eye surface

#### Legal acts specifying learning outcomes:

672/2020 (Medicine),

Status of the course: None

Group of courses: None

Discipline: Medicine

Classes:

Lecture (15 h)

Seminar (5 h)

Classes (40 h)

Step: Kierunek lekarski czwarty rok semestr siódmy (oferta w jęz. angielskim dla obcokrajowców)

Program: Medicine

Form of studies: full-time

Level of studies: uniform master's studies

Introductory subject: human anatomy and physiology, neurology, internal medicine, general surgery, pharmacology

Prerequisites: anatomy and physiology of human vision system- precolloquium (first day of classes): anatomy and physiology of vision system

#### Coordinators:

Andrzej Grzybowski,  
andrzej.grzybowski@uwm.edu.pl

Janusz Pieczyński,  
janusz.pieczynski@uwm.edu.pl

flushing, acute angle closure: diagnostic and differentiation with iridocyclitis; sudden painless lost of vision (therapeutic window- 4 hours, risk factors of stroke and treatment with thrombolysis).

7. Direct ophthalmoscopy and assessment of normal and oedematous optic disc.

8. Anatomy and physiology of organ of vision - written entry test.

9. Clinical case of chosen ophthalmological disease.

10. Students' questions.

#### **TEACHING OBJECTIVE:**

The ability of recognition and treatment of common eye diseases. The knowledge of diagnostic procedures used in ophthalmology. The ophthalmic knowledge necessary in each medical faculty

#### **DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:**

#### **Symbols for outcomes related to the discipline:**

M/NM+++++, M/NMA\_P7S\_KO+++++, M/NMA\_P7S\_KR+++++, M/NMA\_P7S\_UW+++++

#### **Symbols for outcomes related to the field of study:**

K.1.+, K.3.+, K.4.+, K.5.+, KA7\_KO1+, KA7\_KR1+, KA7\_KR2+, K.2.+, E.U32.+, F.U20.+, F.U19.+, F.U3.+, G.U8.+, KA7\_UK4+, KA7\_UO1+, KA7\_UU3+

#### **LEARNING OUTCOMES (Knowledge, Skills, Social competence):**

##### **W1**

In terms of knowledge, the graduate knows and understands:

- 1) the development, structure, and functions of the human vision system in normal and pathological conditions;
- 2) the symptoms and courses of basic ophthalmic diseases with emergency states with treatment
- 3) the diagnostic and therapeutic procedures in ophthalmology;
- 4) the ethical, social, and legal conditions of practising the medical profession and the principles of promoting health, and his/her knowledge is founded on scientific proof;
- 5) the methods of conducting scientific research.

##### **U1**

In terms of skills, the graduate can:

- 1) recognise ophthalmic problems and determine the priorities of medical procedure;
- 2) recognise ophthalmology emergency conditions which require immediate medical intervention;
- 3) plan the diagnostic procedure and interpret its results;
- 4) implement proper and safe therapeutic procedure and anticipate its effects;
- 5) plan his/her own education, continue advancing his/her education to keep knowledge up to date;
- 6) inspire others to engage in the learning process;
- 7) communicate with the patient and his/her family in the atmosphere of trust and recognition of the patient's needs, and communicate unfavourable news;
- 8) communicate with other team members and share

## **K1**

knowledge;

9) assess research results critically and substantiate his/her position as appropriate.

In terms of social skills, the graduate is prepared to:

- 1) establish and maintain a deep and respect-based contact with the patient, and demonstrate an understanding for differences in world views and cultures;
- 2) be guided by the good of the patient;
- 3) abide by medical secrecy and respect the patient's rights;
- 4) take patient-affecting actions based on the rules of ethics, aware of social conditions and limitations imposed by the illness;
- 5) perceive and recognise own limitations, and assess his/her deficits and educational needs;
- 6) propagate health-promoting behaviour;
- 7) use objective sources of information;
- 8) formulate conclusions based on own measurements and observations;
- 9) implement the principles of professional companionship with respect to his/her peers and of cooperation on a team of specialists including representatives of other medical professions, also in multicultural and multinational environment;
- 10) formulate opinions on various aspects of professional activities;
- 11) assume responsibility inherent in the decisions made in professional activities, including the responsibility for own safety and the safety of others.

### **TEACHING FORMS AND METHODS:**

Lecture-['K1', 'W1']-1. Professor's ophthalmology lecture.

2. Final test- at the last lecture

3. Possibility to provide whole lectures on-line

Seminar-['K1', 'W1']-Additional presentation of theoretical ophthalmic knowledge with students' interaction.

Possibility to provide whole seminars on-line.

Classes-['K1', 'U1', 'W1']-1. Practical use of theoretical knowledge in ophthalmic ward: work with ophthalmic patients- from medical history till diagnosis and treatment. 2. Ophthalmic first aid (physical and chemical injuries). 3. Direct ophthalmoscopy with identification of optic disc and big vessels of the retina. Red reflex disturbances. 4. Explanation of student's ophthalmic knowledge troubles.

Classes carried out completely in Ophthalmic Clinical Ward or partially on-line.

### **FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:**

Seminar-(Oral test)-['K1', 'U1', 'W1']-1. Oral answer for presenter's questions. 2. Each student prepares presentation on previously given topic (student can score: 0-10 points)

Classes-(Project)-['K1', 'U1', 'W1']-1. Entry test on ophthalmic anatomy at first class (each student can score: 0-5 points) 2. Chosen ophthalmic case oral presentation- at the last class (each student can score: 0-5 points) 3. Ability of recognition of basic ophthalmic cases. 4. Ability of ophthalmic first aid. 5. Direct ophthalmoscopy with identification of optic disc, big vessels and red reflex disturbances

Lecture-(Exam)-['W1']-Final multiple choice written test (80 questions)- minimal score required for the test pass- 70% (e.g. 56 points of written test) of correct answers. Test fails without 70% points of correct answers- repeat required of final written test. Required all ophthalmic knowledge. Place and time: last

lecture. The final note is compound of: written final test score (max. 80% of final note, e.g. 80 points)+ seminar score (max. 10% of final note (e.g. 10 points))+ classes score (max. 5% of entry test (5 points)+ max. 5% of final case presentation (5 points))

#### Literature:

1. ***Ophthalmology, 3rd ed***, G. Lang, Thieme, 2016, Strony: , Tom: (literatura podstawowa)
2. ***Ophthalmology et a glance. 2nd ed***, J. Oliver, L. Cassidy, G. Jutley, L. Crawley, WilleyBlackwell, 2014, Strony: , Tom: (literatura uzupełniająca)
3. ***The Wills eye manual: office and emergency room diagnosis and treatment of eye disease.***, A. T. Gerstenblith, M. P. Rabinowitz, Lippincott Williams Wilkins, 2012, Strony: , Tom: (literatura uzupełniająca)
4. ***Ophthalmology : an illustrated colour text. 3rd edition***, M. Batterbury, B. Bowling, C. Murphy, Elsevier Churchill Livingstone, 2009, Strony: , Tom: (literatura uzupełniająca)



**Detailed description of ECTS credits awarded - part B**  
**Ophthalmology**

**48SJ-OPHT**

**2025L**

**ECTS: 3.00**

The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

- participation in: Lecture	15 h
- participation in: Seminar	5 h
- participation in: Classes	40 h
- consultation	5 h
Total:	65 h

2. Independent work of a student:

independent work of a student	10.00 h
	0.00 h
Total:	10.00 h

Total (contact hours + independent work of a student): 75.00 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS,  
ECTS Points = 75.00 h : 25 h/ECTS = **3.00** ECTS

Average: 3.00 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher	2.60 ECTS
- including the number of ECTS credits for hours of independent work of a student	0.40 ECTS