



**Karolinska
Institutet**

Course syllabus for

Anatomy and physiology of the eye, 6 credits

Ögats anatomi och fysiologi, 6 hp

This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

Please note that the course syllabus is available in the following versions:

Spring2008 , Spring2010 , Spring2011

Course code	1OP005
Course name	Anatomy and physiology of the eye
Credits	6 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Optometry
Level	G1 - First cycle 1
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Clinical Neuroscience
Decided by	Programnämnden för Optikerprogrammet
Decision date	2007-10-17
Revised by	Education committee CNS
Last revision	2021-05-05
Course syllabus valid from	Spring 2011

Specific entry requirements

Standardised admission requirements E.1.

Objectives

- 1) describe and explain the osteology of the orbit, and its blood supply and innervation.
- 2) describe and explain the external tissues of the eye (sclera, cornea, conjunctiva, and limbus)
- 3) describe and explain the medial tissues and structures of the eye (uvea, choroidea, ciliary body and iris).
- 4) describe and explain the inner tissues and structures of the eye, the ocular media and focusing system (anterior chamber, posterior chamber, lens, vitreous humor, aqueous humor, intraocular pressure and accommodation)
- 5) perform and interpret IOP measurements
- 6) describe and explain the cells, tissues, bloody supply, innervation and metabolism of the retina.

7) describe and explain the optic tract, its structure, function and blood supply (optic nerve, optic chiasm, lateral geniculate body, optic radiations, and visual cortex).

8) describe and explain the external parts of the eye (Tenon's capsule, superciliary arcus, palpebra and conjunctiva).

9) describe and explain the tearing mechanism, the structure and function of the tear film, and the tear film's stability (break-up-time, BUT).

Content

The course contains the following parts: the orbit; external, medial and internal eye tissues; tonometry; retina; optical tract; the external parts of the eye; tearing mechanism; tear film grading. A detailed list of course topics is available in a separate document.

The course is divided in three parts:

Mandatory attendance, 1.0 hp

Grading scale: VU

Compulsory attendance comprises attendance at demonstrations, test, laboratory sessions, seminars, study visits and at practical/clinical exercises.

Assignments, 1.0 hp

Grading scale: VU

Comprises submission of written assignments and completed group assignment.

Theoretical understanding, 4.0 hp

Grading scale: VU

Comprises a theoretical understanding and application of the subject-specific contents of the course.

Teaching methods

The course comprises self-study, demonstrations, laboratory sessions, theoretical overviews (in the form of lectures, seminars, Case methods, practical exercises), study visits and written assignments. The students are given a possibility to train practical skills but must take a great responsibility themselves.

Examination

The examination comprises:

- 1) Compulsory attendance
- 2) Assignments. Examines the goals 1 up to 9.
- 3) Written/Oral examination. Examines the goals 1 up to 9.

This includes attendance for demonstrations, spot-on tests, labs, seminars, field trips and clinical practice. In case of absence, measures to be taken are discussed with the course director. The part is graded according to the scale Fail/Pass.

In the part submission/group assignments, submission of complete assignments is required. The part is graded according to the scale Fail/Pass.

The part Theoretical understanding is examined through written/oral examinations. The part is graded according to the scale Fail/Pass/Pass with distinction. For admission to the examination, it is required

that the parts Mandatory attendance and Assignments are completed.

The whole course is graded according to the scale Fail/Pass/Pass with distinction. A Pass grade requires a Pass grade in all the parts. For a Pass with distinction, a Pass grade in parts 1 and 2, and a Pass with distinction in part 2 is required.

When a student fails an examination, there will be an opportunity for a new examination. All in all, 6 opportunities for a new examination are provided for all parts

Transitional provisions

The course has been cancelled and was offered for the last time in the spring semester of 2012.

Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Board of Education. The course is given in parallel with the course Eye movements and binocular vision and is, at the same time, also based on previous courses in the program.

Literature and other teaching aids

Remington, Lee Ann

Clinical anatomy of the visual system

2. ed. : St. Louis; Mo : Elsevier Butterworth Heinemann, 2005 - xi, 292 s. : ill.

ISBN:0-7506-7490-3

[Library search](#)

Saude, Trygve

Ocular anatomy and physiology

Fletcher, R.

London : Blackwell Science, 1993 - vii, 168 s. : ill.

ISBN:0-632-03599-4

[Library search](#)

Bergmansson, Jan P.G

Clinical ocular anatomy and physiology

Texas eye research and technology center, 2009 - 218 p

ISBN:13:978-0-9800-708-1-1

[Library search](#)