



Course syllabus

Faculty of Health and Life Sciences
Department of Health and Caring Sciences

4BK007 Ögats anatomi och fysiologi, 7,5 högskolepoäng
General Anatomy and Physiology of the Eye, 7.5 credits

Main field of study

Biomedical Sciences
Optometry

Subject

Medicine

Level

Second cycle

Progression

A1N

Date of Ratification

Approved 2015-08-31.

Revised 2023-06-19.

The course syllabus is valid from autumn semester 2023.

Objectives

After completing the course, the student should be able to:

- provide a summary description of the embryonic development of the eye
- describe the anatomy of the orbit, lacrimal gland, eyelids, eye, extraocular muscles, and visual pathways
- explain the physiology of the eye and related structures
- provide a basic description of the innervation of the eye and related structures
- describe the visual process, from the creation of a visual perception to the processing and interpretation of information
- describe the eye's adaptation to different lighting conditions
- provide a basic explanation of how the extraocular muscles cooperate during eye movements
- describe fundamental concepts and principles in physical optics

- explain how the eye functions as an optical instrument
- identify and locate the different parts of the eye through dissection
- describe the most common visual defects
- perform simple objective and subjective refractions.

Content

- The embryonic development of the eye
- The anatomy and physiology of the eye and related structures
- Pupillary response and accommodation
- The blood supply and innervation of the eye and related structures
- Colour vision
- Eye movements
- Visual pathways, perception, and depth perception
- Dissection
- Basic optics involving visible light, light reflection, refraction, dispersion, and optical effects
- Common visual defects
- Objective and subjective refraction

Type of Instruction

Teaching is delivered in the form of lectures, seminars, and laboratory sessions. Participation in laboratory sessions is mandatory. Teaching will primarily be delivered via the learning platform MyModdle.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

The course is examined through an individual written exam and an individual lab report. For a passing grade for the course as a whole, the course objectives must be achieved, and the student must have participated in the mandatory course elements.

A first resit examination is offered within six weeks during the semester.

Course Evaluation

Course evaluation should be conducted during or shortly after the course. The results and analysis should be promptly communicated to those who have taken the course. Students participating in the next course instance should be informed of the results of the previous course evaluation and any improvements that have been made, no later than at the start of the course.

Required Reading and Additional Study Material

Required reading

Andersson, S. & Johansson, K. (n.d.) *Laborationskompendium Ögats anatomi och fysiologi*. Högskolan i Kalmar, (20 pp). Available on the course learning platform.

Martin, L. (2010) *Att mäta syn*. Noman, (276 pp). ISBN 9789174650624

Remington, L. A., Goodwin D. (2021) *Clinical anatomy and physiology of the visual system*. (4th ed.). Elsevier, (288 pp). ISBN 9780323711685

Research articles and other material may be added (max 30 pp).