



**Karolinska
Institutet**

Course syllabus for

Neuro-optometry, 7.5 credits

Neurooptometri, 7.5 hp

This course syllabus is valid from autumn 2024.

Course code	3OP014
Course name	Neuro-optometry
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Optometry
Level	AV - Second cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Clinical Neuroscience
Decided by	Education committee CNS
Decision date	2024-03-13
Course syllabus valid from	Autumn 2024

Specific entry requirements

Degree of Bachelor of Science in Optometry about 180 credits and professional status qualification as optician with contact lens qualification. Or Nurse degree of at least 180 credits, professional status qualification as nurse and 60 credits supplementation within eye care.

Knowledge in Swedish and English equivalent Swedish B/ Swedish 3 and English A/ English 6 (with lowest grade Passed).

Objectives

After the course, the student should be able to

Knowledge and understanding

1. demonstrate relevant anatomical knowledge to comprehend the content and goals of the course
2. exhibit a strong understanding of neurological visual abnormalities
3. show comprehensive knowledge of common neurological conditions, their possible causes, and be familiar with potential differential diagnoses
4. demonstrate good theoretical knowledge of neuro-optometric treatment principles.

Competence and skills

5. pose relevant questions in the history taking, related to common neurological manifestations
6. examine and evaluate visual sensory functions such as visual acuity, visual fields, binocular vision, and color saturation, and determine the likely cause of any deviation from normality
7. examine and evaluate visual motor functions such as eye motility, eye movement abilities, pupil

response, and eyelid position, and determine the likely cause of any deviation from normality

8. based on the medical history and examination results, propose a treatment plan considering the patient's needs and conditions

9. examine patients with neurological abnormalities and tailor the examination based on capability and needs

10. confirm or dismiss suspicions of neurological conditions that may affect the brain's vision capability and, if necessary, make referrals.

Judgement and approach

11. reflect on the need for adapted communication with neurologically affected patients with special conditions, providing examples of considerations that should be taken into account

12. describe one's own role and the significance of other professional's roles in the interprofessional care of the patient.

Content

The course covers diseases and injuries to the visual system due to any neurological event, focusing on the most common conditions that clinicians may encounter in an optometric practice. Students learn about common symptoms and deviations associated with brain injury and the challenges it poses in examining, communicating, and treating patients. In a seminar format, students engage with professionals from other disciplines to discuss the interprofessional care of brain-injured patients. Emphasis is placed on visual changes and appropriate management based on the level of care, including decisions regarding treatment with follow-up or proper referral to the appropriate healthcare institution. The course provides a good understanding of current optometric treatment methods to ensure the best patient care before and after contact with the healthcare system.

The course is divided into the following three modules:

Scientific development, 3.0 hp

Grading scale: GU

Clinical work, 0.5 hp

Grading scale: GU

Theoretical understanding, 4.0 hp

Grading scale: VU

Teaching methods

The course includes self-studies, a theoretical overview and seminars. The theoretical overview is taught through different tuition forms (lectures, case methodology). The seminars include hands-on training on vision therapy and patient visits with conversations. The students are given a possibility to train practical skills but must take great responsibility themselves.

Some course elements are compulsory, see heading "Examination".

Examination

The course is examined in the following way:

Module 1, Scientific development, examines aim 1, 2, 3, 8, 12

a) compulsory quiz

The module is graded U (Fail) or G (Pass). The grade G requires fulfillment of compulsory course

elements, according to instructions.

Module 2, Clinical work, examines aim 2, 5, 8, 9, 10

a) compulsory attendance with active participation in seminars

The module is graded U or G. The grade G requires fulfillment of compulsory course elements, according to instructions.

Module 3, Theoretical understanding, examines aim 2, 3, 4, 6, 7, 10, 11

a) written examination, is graded U, G or VG (Pass with distinction)

b) compulsory attendance with active participation in seminars

The module is graded U, G or VG. The grade G requires G on examination a, as well as fulfillment of compulsory course elements according to instructions. The grade VG requires VG on examination a, as well as fulfillment of compulsory course elements according to instructions.

Course grade

The course is graded U, G or VG.

The grade G on the entire course requires G on module 1, 2 and 3.

The grade VG requires G on module 1 and 2, and VG on module 3.

Absence from or unfulfillment of compulsory course element

The examiner decides whether, and if so how, absence from or unfulfillment of compulsory course elements can be made up for. Study results cannot be reported until the student has participated in or fulfilled compulsory course elements, or compensated for any absence/ failure to fulfill in accordance with instructions from the examiner. Absence from or unfulfillment of a compulsory course element may imply that the student can not retake the element until the next time the course is offered.

Possibility of exception from the course syllabus' regulations on examination

If there are special grounds, or a need for adaptation for a student with a disability, the examiner may decide to deviate from the syllabus' regulations on the examination form, the number of examination opportunities, the possibility of supplementation or exemptions from the compulsory section/s of the course etc. Content and learning outcomes as well as the level of expected skills, knowledge and attitudes may not be changed, removed or reduced.

Transitional provisions

If the course is cancelled or goes through substantial changes, information about interim regulations will be stated here.

Other directives

Course evaluation takes place according to guidelines established by Karolinska Institutet.

Teaching in English may occur.

Literature and other teaching aids

Mandatory literature

Articles and other teaching aids may be added according to teacher's instructions

Clinical ophthalmology : a systematic approach

Kanski, Jack J.; Bowling, Brad; Nischal, Ken K.; Pearson, Andrew

7. ed. : Edinburgh : Butterworth-Heinemann, 2011 - ix, 909 s.

ISBN:978-0-7020-4093-1 (hbk.) LIBRIS-ID:12189545

[Library search](#)

Recommended literature and other resources

Bynke, Hans G.

Neuro-oftalmologi

3., [rev. och utvidgade] uppl. : Lund : Studentlitteratur, 1996 - 156 s.

ISBN:91-44-00080-4 (korr.) ; 220:00 LIBRIS-ID:8352505

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