



**Karolinska
Institutet**

Course syllabus for

Ocular Pharmacology and Diagnostics, 7.5 credits

Okulär farmakologi och diagnostisk undersökningsmetodik, 7.5 hp
This course syllabus is valid from autumn 2024.

Course code	3OP013
Course name	Ocular Pharmacology and Diagnostics
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).

Students who have failed their VIL (clinical training opportunity) after demonstrating serious deficiencies in understanding, skill, or professional attitude, and done this to the degree that client or patient safety or client/ patient/ employer trust for the healthcare has been jeopardised, will qualify for a new VIL opportunity only after completion of an individual action plan.

Objectives

After the course, the student should be able to

Knowledge and understanding

1. provide a concise overview of general pharmacological principles
2. list and describe pharmaceutical agents used in the examination of the eye and vision, and thoroughly explain their effects and contraindications
3. demonstrate comprehensive theoretical knowledge of standardized methods/techniques for examining

the eye and vision

4. explain the concepts of structure and function relation

5. explain the concepts of screening and diagnosis.

Competence and skills

6. select and perform an appropriate method for examining the eye and vision

7. assess the quality and reliability of examinations and differentiate between normal and abnormal outcomes.

Judgement and approach

8. demonstrate a strong ability to evaluate when each examination is justified from a risk-benefit perspective

9. exhibit a strong ability to approach, instruct, and inform individuals in examination situations in a respectful and individually tailored manner.

Content

The course includes the following topics: general pharmacological principles, how different drugs interact, diagnostic drugs and their area of use, as well as side effects associated with their use.

Techniques for examining and assessing the anterior and posterior segments of the eye, such as applanation tonometry, 90D lens, and advanced imaging techniques. The course provides in-depth knowledge of structural and functional measurements, such as optical coherence tomography (OCT) and visual field testing.

The course is divided into the following four modules:

Scientific development, 3.0 hp

Grading scale: GU

Practical skills, 1.5 hp

Grading scale: VU

Clinical work, 1.5 hp

Grading scale: GU

Theoretical understanding, 1.5 hp

Grading scale: GU

Teaching methods

The course includes self-study, VIL (clinical skills training, patient reception), and theoretical lectures. The theoretical overview is made through different tuition forms (case methodology, lectures etc). 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 1-8

a) compulsory written assignments

- b) compulsory diagnostic exam on pharmacological agents
- c) compulsory attendance with active participation in seminar

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

Module 2, Practical skills, examines aim 6-9

- a) practical examination in applanation tonometry, is graded U, G or VG (Pass with distinction)
- b) practical examination in 90D lens, is graded U, G or VG

The module is graded U, G or VG. The grade G requires at least G on examination a and b. The grade VG requires VG on both examination a and b.

Module 3, Clinical work, examines aim 6 and 7

- a) compulsory completion of eye health examination
- b) compulsory attendance with active participation in patient reception (VIL)

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

Module 4, Theoretical understanding, examines aim 1-7

- a) Written examination, is graded U or G

The module is graded as the written exam, U or G.

Course grade

The entire course is graded U, G or VG.

The grade G on the entire course requires G on module 1-4.

The grade VG on the entire course requires G on module 1, 3 and 4, as well as VG on module 2.

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.

Guidelines in case of failure of VIL

The examiner may, with immediate effect, interrupt a student's clinical placement (or equivalent) if the student demonstrates such serious deficiencies in knowledge, skills or attitude that patient safety or patient confidence in healthcare is at risk. If a clinical placement is interrupted in this way the student is deemed to have failed that element and to have used up one clinical placement opportunity. In such cases, an individual action plan should be set up stating which activities and tests are required before the student is qualified for a new clinical placement on the course.

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's 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 knowledge, skills 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

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

Hopkins, G. A.; Pearson, R. M.q (Richard M.); Davies, P. H. O'Connorq (Patrick Henry O'Connor)

Ophthalmic drugs : diagnostic and therapeutic uses

5th ed. : Edinburgh : Butterworth Heinemann/Elsevier, 2007. - vii, 331 p.

ISBN:978-0-7506-8864-2 (pbk.) LIBRIS-ID:11090439

[Library search](#)

Optometry : science, techniques and clinical management

Rosenfield, Mark; Logan, Nicola; Edwards, Keithq (Keith H.)

2nd ed. : Edinburgh ;a New York : Butterworth Heinemann Elsevier, 2009. - xi, 555 p.

ISBN:978-0-7506-8778-2 (alk. paper) LIBRIS-ID:11689845

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