



**Karolinska
Institutet**

Course syllabus for

Advanced Optometry 1, 12 credits

Synundersökningsmetodik 1, 12 hp

This course syllabus is valid from autumn 2020.

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

Autumn2020 , [Autumn2022](#) , [Autumn2023](#)

Course code	1OP071
Course name	Advanced Optometry 1
Credits	12 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	Education committee CNS
Decision date	2020-04-01
Course syllabus valid from	Autumn 2020

Specific entry requirements

Passed results of at least 45 credits from the Study Programme in Optometry's semester 1 and 2.

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 have 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

- 1) describe and analyse different physiological aspects related to different visual defects,
- 2) describe and apply methods for study of binocular functions,
- 3) apply methods to examine and evaluate the anterior segments of the eye (tear film, cornea, conjunctiva, intraocular lens),
- 4) perform vision field screening (perimetri) and handle instruments for diagnosis and discovery of lesions in the posterior part of the eye,
- 5) perform a complete eye examinations and analyse the results from a full refraction in trial frame and foropter with routine adapted to the patient's visual defect, visual - and mental ability, and interpret and evaluate the results,
- 6) list, describe, measure and analyse the myopia in relation to the patient's age and expected ability,

- 7) apply communicative tools for medical history taking,
- 8) examine and analyse research results in relation to different optometric case types, including prescribe and practically apply treatment, and
- 9) from a global health perspective, be able to understand and evaluate occurrence and differences in refraction development among individuals.

In addition to the above the student should, in a level-suited optometry -, care - and scientific perspective, be able to

- 10) discuss and evaluate knowledge at scientific level,
- 11) show understanding about different scientific types of publication and about the disciplinary foundation of the field,
- 12) identify his/her need for additional knowledge and continuous skill development,
- 13) compare and reflect on relevant information from scientific literature, and discuss new facts, phenomena and issues, and
- 14) formulate scientific text in writing.

Aim 10-14 should be seen in relation to the document "Vetenskaplig strimma Optikerprogrammet".

Content

The course includes the following: perform complete eye examination focusing on binocular vision, clinical methodology for preliminary tests, phoria measurement, vergence measurement and ACA value, vision at near, refraction in foropath and trial frame, binocular refraction methodology, patient routines and biomicroscopy including examining cornea, conjunctiva, intraocular lens and evaluate the tear film. Vision at near also includes presbyopia and addition at near. Furthermore, the course contains Vision field screening, fundus imaging and physiological aspects related to visual defects.

In addition to this the course is part of the teaching of general scientific knowledge within the program. In relation to teaching of general scientific knowledge, the students continue to broaden their knowledge related to the scientific base of optometry, science and proven experience and scientific communication. They also develop their knowledge and understanding, skills and abilities, their judgement, scientific thought and attitude, in relation to optometry and a lifelong learning. The teaching of general scientific knowledge is described in a separate document.

The course is divided in the following three (3) modules:

Clinical work, 4.0 hp

Grading scale: GU

Module 1 includes practical test, patients, formative assessment of clinical proficiencies in connection with VIL, portfolio, case and imaging exams.

Theoretical understanding, 4.0 hp

Grading scale: VU

Module 2 includes theoretical understanding and review of the topic-specific contents of the course.

Scientific development, 4.0 hp

Grading scale: GU

Module 3 includes assignments in KI's virtual learning environment, the scientific streak and written assignments.

Teaching methods

The course includes self-study, demonstrations, test, laboratory sessions, theoretical overviews (e.g. lectures, seminars, flipped classroom, case methods), practical/ clinical exercises (VIL), portfolio and written assignments. The students are given a possibility to train practical skills but must take a great responsibility themselves.

Seminars and demonstration sessions are compulsory.

Examination

The course is examined in the following way: *Module 1, Clinical work*, examines the learning outcomes 1 up to 9. The module is assessed through practical test, formative assessment of clinical proficiencies in connection with VIL, portfolio, case and imaging exams. The module is given the grade Fail or Pass.

Module 2, Theoretical understanding, examines the learning outcomes 1 up to 14. The module is examined through written examination. Re-examination may take place orally. The module is given the grade Fail, Pass or Pass with distinction.

Module 3, Scientific development assess the aims 1-14. The module is assessed through assignments in KI's virtual learning environment, the scientific streak and written assignments. The module is given the grade Fail or Pass.

Criteria for assessing practical tests are established in separate documents.

Course grade

The entire course is given the grade Fail (U), Pass (G) or Pass with distinction (VG).

For the grade Pass (G) on the entire course, Pass (G) on all modules is required, as well as fulfillment of compulsory course elements.

For the grade Pass with distinction (VG) on the entire course, Pass (G) on module 1 and 3, and Pass with distinction (VG) on module 2 is required, as well as fulfillment of compulsory course elements.

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.

Limitation of the number of practical test or training sessions

Students who do not pass a regular examination are entitled to re-sit the examination on five more occasions. If the student has carried out six failed tests, no further examination opportunity is given. Each occasion the student participates in the same test counts as an examination. In case a student is registered for an examination but does not attend, this is not regarded as an examination. To be valid for judgement, the examination must be submitted at the given time, or the student will be referred to the next examination occasion.

Regarding VIL, the number of times a student has the right to follow the course and thereby be examined, is limited to two (2) times.

Guidelines in case of failure

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 VIL opportunity is interrupted in this way, the student is deemed to have failed that module and to have used one VIL opportunity. In such cases, an individual action plan should be established, where it is made explicit what activities and examinations are required before the student is qualified for a second VIL opportunity 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 in accordance with KI's local guidelines. Compilation of the students' answers in course questionnaires and the course coordinator's analysis of these are published on KI's public course web.

Some teaching may be in English.

Literature and other teaching aids

Benjamin, William J.; Borish, Irvin M.

Borish's clinical refraction

2nd ed. : St. Louis, Mo. : Butterworth-Heinemann/Elsevier, c2006. - xviii, 1694 p.

ISBN:0-7506-7524-1 LIBRIS-ID:10580274

[Library search](#)

Scheiman, Mitchell; Wick, Bruce

Clinical management of binocular vision : heterophoric, accommodative, and eye movement disorders

Fourth edition. : Philadelphia, Pennsylvania : Lippincott Williams & Wilkins, 2014 - ix, 722 pages

ISBN:9781451175257 LIBRIS-ID:16337727

[Library search](#)

Rabbetts, R. B.

Clinical Visual Optics

4:e upplaga : Oxford: Butterworths - 488s. : 2007

ISBN:0-7506-8874-2

[Library search](#)

Clinical procedures in primary eye care

Elliott, David B.

3rd ed. : Edinburgh ;a New York : Elsevier/Butterworth Heinemann, 2007 - xii, 342 p.

ISBN:978-0-7506-8896-3 LIBRIS-ID:11008167

[Library search](#)

Grosvenor, Theodore P

Primary care optometry

5th ed. : St. Louis : Butterworth-Heinemann/Elsevier, 2007 - 510 p.

ISBN:978-0-7506-7575-6

[Library search](#)

Millodot, Michel

Dictionary of optometry and visual science

7. ed. : Oxford : Butterworth-Heinemann, 2009 - 409 p

ISBN:978-0-7020-2958-5

[Library search](#)

Evans, Bruce J. W.; Pickwell, David.t Binocular vision anomalies

Pickwell's binocular vision anomalies

5. ed. /b Bruce J.W. Evans : Edinburgh ;a New York : Elsevier Butterworth Heinemann, 2007 - 454 s.

ISBN:978-0-7506-8897-0 LIBRIS-ID:10659509

[Library search](#)

Foundations of binocular vision [Ljudupptagning] : a clinical perspective

Steinman, Scott B.; Steinman, Barbara A.; Garzia, Ralph Philip; Nygaard, Ragnhild

Johanneshov : TPB, 2010 - 1 CD-R (29 tim., 5 min.)

LIBRIS-ID:12620973

Rutstein, Robert P.

Anomalies of binocular vision : diagnosis & management

Daum, Kent Michael

St. Louis ; b Mosby, c cop. 1998 : Mosby, cop. 1998 - xv, 368 s.

ISBN:0-8016-6916-2 LIBRIS-ID:5674465

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