



**Karolinska
Institutet**

Course syllabus for

Optometry 2, 10.5 credits

Grundläggande optometri 2, 10.5 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:

Spring2013 , Autumn2013 , Autumn2015 , Autumn2017

Course code	1OP044
Course name	Optometry 2
Credits	10.5 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	Programnämnd 8
Decision date	2012-05-08
Revised by	Programnämnd 8
Last revision	2013-05-07
Course syllabus valid from	Autumn 2013

Specific entry requirements

MaB, FyA, KeA and BiA (or NkB)

Objectives

After the course, the student should be able to:

- 1) describe how luminance influences contrast sensitivity and describe how aspects of physiological optics are related to the visual acuity
- 2) list, describe and apply different visual acuity charts in relation to the patient's age, communicative ability or vision ability,
- 3) list and apply different methods for identification and determination of astigmatic visual defects and explain choice of method
- 4) list and apply different methods for monocular and binocular refraction
- 5) list and apply different methods for binocular tuning of refraction
- 6) describe, apply and interpret a refraction and preliminary optometric tests such as cover test, motility test, accommodation test, suppressions test and stereo test, and put the test results in relation to history

and symptoms,

- 7) list and handle various types of multifocal glass and describe their properties,
- 8) apply instruments for lens measuring to verify multifocal glass strengths
- 9) describe and account for the preconditions and function of the binocular vision and foris and tropies – cause, occurrence, classification and related symptoms, and
- 10) reason about sustainable development as a concept and as an integrated (ecological, economic and social) perspective on social progress and man's interplay with nature – particularly from an optometric perspective.

And that the student in a general scientific content should be able to show:

- 11) ability to review knowledge at a scientific level
- 12) understanding about different scientific publications and about the disciplinary foundation of the field,
- 13) ability to compare and put together relevant information from scientific literature and to discuss new facts, phenomena and issues and
- 14) ability to orally and in writing account for and discuss information, problems and solutions in dialogue with different groups.

Aim 11-14 should be seen in relation to the document "Vetenskaplig strimma Optikerprogrammet".

Content

The course contains the following parts: visual acuity (be seen in relation to Basic optometry 1), luminance, method to establish astigmatic visual defects balancing (binocular), medical history (in relation to preliminary tests), preliminary tests, different lenses (multi focal), material- and instrument knowledge, motility test, accommodation test, pupil test, the preconditions of the binocular vision and function, and test for suppression and stereoscopic vision, phorias and tropias, cover test and focimeter.

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

The course is divided into four (4) parts:

Clinical Work, 2 hp Part 1 include submission of written assignments and implemented group assignment and accomplished clinical work. **Focimeter Skills, 0.5 hp** Part 2 includes the ability to use focimeter for attestation of spherical, toric and multifocal glass strengths. **Theoretical Understanding, 5 hp** Moment 3 includes theoretical understanding of the course content. **Investigative Techniques, 3 hp** Moment 4 includes the ability to carry out and reflect around practical examination methodology.

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 course be examined against the following aims and on the following way:

Part 1, Clinical work, examines the learning outcomes 1-14. Compulsory participation applies at

demonstrations, test, laboratory sessions, seminars, study visits and at practical/clinical exercises. in case of absence, measures to be taken are discussed with the course director. The part is examined through written assignments, workshops and a practical test in refractioning. The part is graded according to the scale Fail (U)/Pass (G).

Part 2, Focimeter skills examine aim 6. The part is examined through a practical test in focimeter. The part is graded according to the scale Fail (U)/Pass (G).

Part 3, Theoretical understanding examine the aims 1-14. The part is examined with written/oral test. The part is graded according to the scale Fail (U)/Pass (G)/Pass with distinction (VG).

Part 4, Investigative Techniques examines the aims 1 up to 9. Be examined through a practical test in refractioning and preliminary tests. The part is graded according to the scale Fail (U)/Pass (G).

The whole course is graded according to the scale Fail/Pass/Pass with distinction. For a Pass grade in the course, a Pass grade is required for all its parts. To pass with distinction is required passed in part 1, 2 and 4 and pass with credit in part 3.

Criteria for assessing practical tests are established in separate documents

A student who fails the regular examination has the right to participate at additional five examinations. If the student fails six examinations/test there will be no additional examination. As an examination, the times that the student has participated the same test are counted. Submission of blank exam is counted as an examination. Examination to which the student has registered but not participated in is not counted as an examination.

Transitional provisions

If the course is closed down or undergoes major changes, students who have not completed the course are given the possibility, during four semesters from the date when the student first registered in the course, to be examined under the then current syllabus After four semesters, the student is examined under the new syllabus.

Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Board of Higher Education.

Teaching in English can occur.

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](#)

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

[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](#)

Steinman, S.; Garzia, B.

Foundations of Binocular Vision - A Clinical Perspective.