Course syllabus for

Eye movements and binocular vision, 4.5 credits

Ögonrörelser och binokulärseende, 4.5 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:
Spring2008 , Spring2010 , Spring2011

Course code	1OP006
Course name	Eye movements and binocular vision
Credits	4.5 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	Programnämnden för Optikerprogrammet
Decision date	2007-10-17
Revised by	Education committee CNS
Last revision	2021-05-05
Course syllabus valid from	Spring 2011

Specific entry requirements

Standardised admission requirements E.1.

Objectives

1) - describe and explain the extraocular muscles, their insertion and origin, function, movement, innervation and blood supply.
2) - perform and interpret the results of an ocular motility test.
3) - describe and explain human accommodation ability - how it is stimulated, how it changes with age; and describe and explain pupil responses and how they are associated with accommodation.
4) - perform and interpret the results of an ocular accommodative test (push-up) and static/dynamic pupil response testing.
5) - describe, explain, and reflect over binocular vision - advantages, conditions, function and visual processing.
6) - perform and interpret the results of suppression testing (polarized, 4 prism diopters base out and Mallett) and stereotesting (Lang, Titmus and TNO).
7) describe and explain phorias - cause, incidence, classification and related symptoms.

8) perform and interpret the results of a cover test for phorias and tropias (type and direction).
9) - utilize a focimeter for verification of spectacles with prism correction.

Content

The course contains the following parts: Extraocular muscles, visual physiology, motility testing, accommodation, accommodation testing, presbyopia, pupil function and testing, conditions for binocular vision and function, suppression testing, stereovision testing, phorias and tropias, cover test and lensometer/focimeter.

The course starts with self-study and continues with exercises, theoretical overviews and demonstrations. The theoretical overview is made through various tuition forms (Internet-based, Case methodology, whole-group lectures etc). The students are given a possibility to train practical skills but must take a great responsibility themselves.

The course is divided in three parts:

Mandatory attendance, 1.0 hp

Grading scale: VU

Compulsory attendance comprises attendance at compulsory demonstrations, test, laboratory sessions, seminars, study visits and at practical/clinical exercises.

Assignments and focimeter skills, 1.0 hp

Grading scale: VU

Comprises written assignment and practical tests in focimeter.

Theoretical understanding, 2.5 hp

Grading scale: VU

Comprises a theoretical understanding and application of the subject-specific contents of the course.See separately documents for criteria at practical test.

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 examination comprises:
1) Mandatory attendance.
2) Assignments and focimeter skills. Examination of outcomes 1 to 9.
3) Written/Oral examination. Examination of outcomes 1 to 9.

In this part Compulsory attendance is required attendance 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 graded according to the scale Failed/Passed

In this part Written assignments and focimeter is required written assignment and practical tests. The part is graded according to the scale Fail/Pass.

The part Theoretical understanding is examined through written/oral examinations. The part is graded according to the scale Fail/Pass/Pass with distinction. For admission to the examinations, completed Mandatory attendance and submitted assignments are required.

The entire 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 and 2 and pass with credit in part 3.

When a student fails an examination, there will be an opportunity for a new examination. All in all, 6 opportunities for a new examination are provided for all parts

Transitional provisions

The course has been cancelled and was offered for the last time in the spring semester of 2012.

Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Board of Education. The course is given in parallel with the course the Anatomy and physiology of the eye and is, at the same time, based on knowledge acquired in previous courses.

Literature and other teaching aids

Evans, Bruce J. W.; Pickwell, David

Pickwell's binocular vision anomalies : investigation and treatment

4. ed : Oxford : Butterworth-Heinemann, 2002 - 450 s..
ISBN:0-7506-4714-0 LIBRIS-ID:5573911
Library search

Steinman, S.; Garzia, B.

Foundations of Binocular Vision - A Clinical Perspective.
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

Rabbetts, Ronald B.

Clinical visual Optics

4.ed. : Edinburgh : Elsevier/Butterworth Heinemann, 2007 - 470 p

ISBN:9780750688741

Library search