Course syllabus for

Environmental Optometry, 6 credits

Arbetsplatsoptometri, 6 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:
Spring2015 , Autumn2015 , Autumn2017

Course code	1OP064
Course name	Environmental Optometry
Credits	6 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Optometry
Level	G2 - First cycle 2
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Clinical Neuroscience
Decided by	Programnämnd 8
Decision date	2013-05-07
Course syllabus valid from	Spring 2015

Specific entry requirements

Passed results of at least 55 credits from the Study Programme in Optometry semester 1 and 2, and at least 45 higher education credits from semester 3 and 4.

Objectives

After the course, the student should:

1) list and describe physical and psychosocial factors in the workplace.
2) describe and critically assess an employee's work station in terms of visual ergonomics.
3) describe and critically assess the illumination conditions of a workplace.
4) evaluate the quality of a computer screen.
5) be able to make a critical review of relations that influence the visual quality in relation to visual ergonomics, illumination and monitor quality and apply this to an improvement for the employee on the workplace
6) list and describe how optical radiation can cause damage to the eye and how to prevent/protect against it.
7) prescribe and fit special correction in relation to occupational needs
8) be able to understand and apply legislation that regulates the field of occupational optometry

And that the student

9) should be able to search for and evaluate scientific literature
10) should be able to understand follow future development of the field,
11) should have knowledge of the disciplinary foundation of the field and knowledge of current research and development and knowledge of the relationship between scholarship and best practice and the relationship importance for the profession exercise,
12) good ability to identify his need of additional knowledge and that continuous develop his skills
13) much large understanding about the knowledge role in the society and if the responsibility of people for how it is used.

Aims should be seen in relation to the document "Vetenskaplig strimma Optikerprogrammet".

Content

This course consists of the following components: laws regulating the field of workplace medicine; repetitive motion injuries; healthcare in Sweden; visual ergonomics and illumination; visual quality; computer screen quality and psychosocial workplace conditions. Various types of work stations such as working at a computer screen, office environment and other occupational categories will be covered. The course also covers not only how the ocular media are affected by light (especially UV), but also how the light entering the eye is affected by the ocular media (glare, contrast). Optical radiation and protective eyewear are also discussed. Varying workplaces, such as work with visual displays and office environment and other professional categories will be treated. The course also consists of interaction between the media of the eye and optical radiation and eye protection against optical radiation.

In addition to this is the course is part of the general scientific education within the program. As part of the general scientific education the students will practice their scientific communication skills. The students will also develop their knowledge and understanding, skills and abilities, judgement and scientific thought- and attitude in relation to optometry and a lifelong learning. The general scientific education is described in a separate document.

The project work consists of:

- Patient selection (need of working glasses)
- Medical history and fitting of special correction
- Work place visits with evaluation of the working environment respect; the employee's background facts, psychosocial working environment, repetitive strain status, visually ergonomic status, illumination and evaluation of monitor quality when necessary
- Choice of correction, lens type, frame and alignment, order, and follow up.

The course is divided into three (3) parts.

Clinical work, 1.5 hp Part 1 includes written assignments and clinical work. **Projectwork, 2.5 hp** Part 2 includes a project containing a critical review of relations that influence the visual quality in relation to visual ergonomics, illumination and monitor quality and apply this to an improvement for the employee on the workplace. **Theoretical Understanding, 2 hp** Part 3 includes theoretical understanding.

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 parts are examined in the following way:

Part 1, Clinical work. Examined through assignments and practical tasks. A Pass grade also requires attendance at seminars, laboratory sessions and study visits. in case of absence, measures to be taken are discussed with the course director. The part is graded according to the scale Fail/Pass.

Part 2, Theoretical understanding. The part is examined with written/oral examination. The part is graded according to the scale Fail/Pass/Pass with distinction. For admission to the examination in Theoretical understanding, it is required that the part Assignments is submitted and that supplementation of the part Mandatory attendance is completed.

Part 3, Project Work. Examined through written and oral presentation. The part is graded according to the scale Fail/Pass.

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. For a Pass with distinction, a Pass grade in parts 1 and 3, and Pass with distinction in part 2 are required.

Criteria for evaluating the parts of the course are determined in separate documents.

When a student fails an examination, there will be an opportunity for a new examination. 6 occasions been given total to achieve at least passed results for each part.

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.

The course may not be included in higher education qualification at the same time with the overview and passed course, whose contents completely or partly corresponds to the course content. The following course is (partly) overlapping: *1OP025, Workplace optometry, 6 credits.*

Literature and other teaching aids

Anshel, Jeffrey

Visual ergonomics handbook

Anshel, Jeffrey

Boca Raton, FL : Boca Raton, FL : CRC Press, 2005 - 214 s.

ISBN:1-5667-0682-3 LIBRIS-ID:9793733

Library search

Boyce, Peter R.

Human factors in lighting

2. ed. : London : Taylor & Francis, cop. 2003 - xvi, 584 s.
ISBN:0-7484-0950-5 (pbk. : alk. paper) LIBRIS-ID:8900742
Library search

Jeis, Ola

Ljus & rum Ljus och rum : planeringsguide för belysning inomhus

Franzell, Magnus

3. utg. : Stockholm : Ljuskultur, cop. 2013 - 191 s.
ISBN:9789163724886 LIBRIS-ID:14007335
Library search

Nyman, Karl-Gösta; Spångberg, Olle

Synen, ögat, arbetet : synergonomi, ögats funktioner, skaderisker i arbetet, skyddsåtgärder, råd

Gross, Cinna

2., rev. utg. : Karlskrona : Futura, cop. 1996 - S. 3-160
ISBN:91-7095-073-3 (korr.) LIBRIS-ID:8228531
Library search

Sheedy, James E.; Shaw-McMinn, Peter G.

Diagnosing and treating computer-related vision problems

Amsterdam : Butterworth-Heinemann, cop. 2003 - xi, 281 s.
ISBN:0-7506-7404-0 LIBRIS-ID:8747329
Library search