



**Karolinska
Institutet**

Course syllabus for

Optics of investigative instruments, 3 credits

Instrumentoptik, 3 hp

This course syllabus is valid from autumn 2008.

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

Autumn2008 , Autumn2011

Course code	1OP014
Course name	Optics of investigative instruments
Credits	3 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Optometry
Level	G1 - First cycle 1
Grading scale	Fail (U), pass (G) or pass with distinction (VG)
Department	Department of Clinical Neuroscience
Decided by	Programnämnden för Optikerprogrammet
Decision date	2008-03-19
Course syllabus valid from	Autumn 2008

Specific entry requirements

Standardised admission requirements E.1.

Objectives

After the course, the student should: - account for optical principles and functions of the most common examination and measuring instruments that an optician comes into contact with - relate the function of the instruments to common examination methodology and be able to develop an attitude of one's own to the instruments - assess the instruments' limitations regarding precision, measurement errors and various handling errors - evaluate and get familiar with functions of future examination instruments

Content

Optometric methods of measurement. Overview of the structure of the most common examination instruments, and especially the optical principles underlying their function. The course comprises the biomicroscope, the direct and indirect ophthalmoscope, the retinoscope, subjective and objective refractometers, autorefractors, keratometers and instruments for corneal topography and various types of focimeters.

Teaching methods

The teaching is given in the form of lectures interleaved with assisted problem solving where the theoretical knowledge is illustrated and practiced individually through calculation examples.

Examination

The course is examined through written assignments and written examination. The grading scale Fail/Pass/Pass with distinction. Criteria for evaluating the parts of the course are established in separate documents

Transitional provisions

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

Other directives

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

Literature and other teaching aids

Freeman, Michael Harold

Optics

Hull, C. C.; Charman, W. N.

11. ed. : Oxford : Butterworth-Heinemann, 2003 - 563 s.

ISBN:0-7506-4248-3 LIBRIS-ID:8917891

[Library search](#)

Rabbetts, R. B.

Clinical Visual Optics

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

ISBN:0-7506-8874-2

[Library search](#)