SK2301 Optical Physics 3.0 credits

Optisk fysik, tilläggskurs

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Engineering Physics

Specific prerequisites

For external students the following are required: 120 credits within natural sciences and engineering or corresponding knowledge and documented proficiency in English B or corresponding knowledge.

Recommended previous knowledge:
SK2300 (Optical physics, 6 ECTS) or corresponding knowledge is strongly recommended to be able to take the course.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After the course, the student will be able to:

- use an assigned optical design program for analysis and basic design of optical systems
- predict and, depending on the problem, deal with optical aberrations in given situations.

Course contents

Chromatic and monochromatic aberrations and their implications Methods to minimize aberration effects. Managing an optical design program.

Course literature

Hecht, E., Optics, Addison Wesley (current edition will be written at the home page of the course, 4 weeks before the course starts at the latest).

Manual for the design program used in the course (will be written at the home page of the course, 4 weeks before the course starts at the latest).

Examination

- INL1 - Hand in Assignments, 3.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Other requirements for final grade

Hand-in assignments (INL1; 3 ECTS, grading scale A-F).

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.