



# SK2300 Optical Physics 6.0 credits

## Optisk fysik

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

## Establishment

Course syllabus for SK2300 valid from Autumn 2010

## 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:

Basic knowledge within classical physics, particularly waves and elementary classical optics (course SK1101, Classical Physics or corresponding), mathematics (vector analysis, differential equations, Fourier transformation).

# Language of instruction

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

# Intended learning outcomes

There are two main aims:

- To give deepened and widened insight into optical physics seen both as science and as technology.
- To create a fundament for the more specialized courses in optics.

# Course contents

Electromagnetic fields, propagation in vacuum and matter. Polarization, interference, thin film optics, optical metrology. Diffraction, fourier optics, coherence.

# Course literature

Hecht, E., Optics (4th ed. 2002 or later), Addison Wesley Wesley (the edition used will be announced on the course home page at least four weeks prior to the start of the course).

# Examination

- TEN1 - Examination, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 2.0 credits, grading scale: P, 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

One written exam (TEN1; 4 university credits). Laboratory work (LAB1; 2 university credits).

# 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.