



# SK2360 Laser Metrology and Optical Metrology 6.0 credits

## Lasermätteknik och optisk mätteknik

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

### Establishment

Course syllabus for SK2360 valid from Autumn 2007

### Grading scale

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

### Education cycle

Second cycle

### Main field of study

Physics, Engineering Physics

### Specific prerequisites

Recommended prerequisites: SK1112 (Electro magnetism and waves, 9 credits) or equivalent.

### Language of instruction

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

# Intended learning outcomes

The main goals are to present optical measurement methods to all kinds of MMT Master of engineering students, to ensure that this alternative exists when solving measurement problems; to present modern optronics to the target group; to make the students comfortable with technical presentations to a non-technically educated group.

After the course, the student will be able to:

- propose measurement strategies related to optics and lasers and estimate the functionalities in comparison to other measurement systems
- present solutions for decision-making to management groups with non-technical educations
- read articles about technical progress, for example in The Scientific American and summarize as a presentation to the above mentioned group.

## Course contents

Optics repetition. Laser and laser radiation, optical fibers. Distance and velocity measurements. Measurement illustrations. Holographic methods.

## Course literature

Course literature will be announced on the course home page at least four weeks prior to the start of the course.

## Examination

- RED1 - Report, 2.0 credits, grading scale: P, F
- TEN1 - Examination, 4.0 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

Examination in two parts:

a technical news article in English or another non Swedish language will be summarized and presented to a non-technically educated group of people (RED1; 2 credits, grading scale P/F)

oral exam where the range and general view of the topic is presented to the teacher (TEN1; 4 credits, 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.